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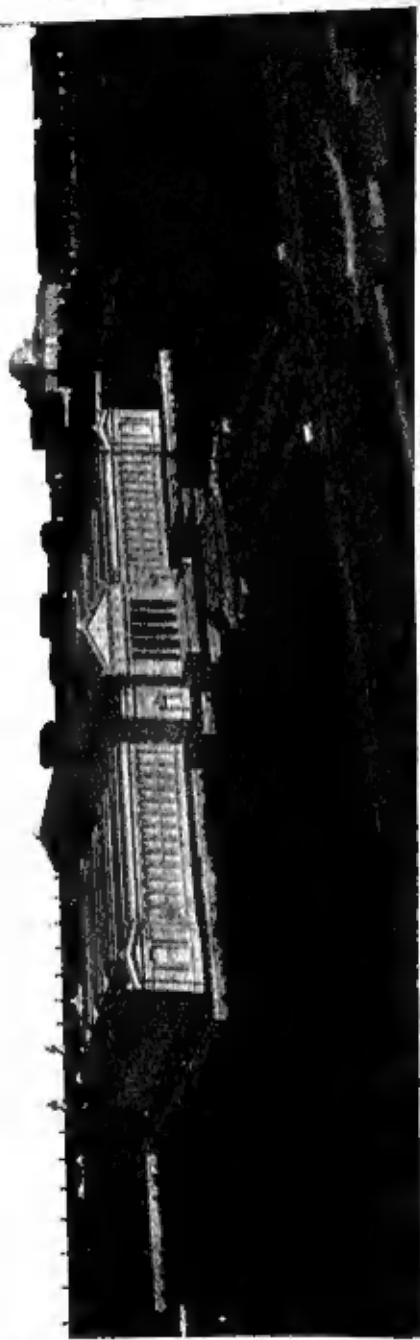
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VIEW FROM THE MICHIGAN AVENUE APPROACH



VIEW FROM THE LAKE MICHIGAN SIDE

By courtesy of the Board of South Park Commissioners.

VIEWS OF THE PARKS AND BUILDINGS OF THE MUSEUM IN GRANT PARK.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 133.

~~A 563~~

REPORT SERIES.

Vol. III, No. 3.

ANNUAL REPORT OF THE DIRECTOR

TO THE

BOARD OF TRUSTEES

FOR THE YEAR 1908.

32835

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CHICAGO, U. S. A.

January, 1909.



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ANNUAL REPORT OF THE DIRECTOR.

1908.

To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1908.

From a physical point of view the condition of the Museum, while in detail showing a continued advance along those lines involving the better protection and more careful arrangement of the material on exhibition and in storage within the building, denotes little alteration except in two particulars: the increased number of new exhibition cases in all Departments, and the extension of the exhibition area into the East Annex. The new cases, approximating \$26,000 in cost, make their best impression in the Botanical Gallery, and the very capable work that has been performed in transferring and rearranging the exhibition material gives an entirely new value to it. The East Annex contained for several years the Transportation collection received from exhibitors at the Columbian Exposition. The reduction of the scope of the Institution and the removal of these, therefore, inappropriate exhibits, vacated about twenty halls and courts, and until this year that section of the building has been closed to the public and used for storage and assembling purposes. The pressure for floor space became so acute, however, that at the beginning of this year a large part of the Annex was refloored and repaired, and turned over to the Department of Anthropology, and this area now contains Philippine, South Pacific, and African collections.

A serious, and it may be said rather expensive effort has been made during the year to improve the appearance of the exterior of the building, but at this date it is a regrettable fact that the North side of the building — the "weather" side — gives little evidence of the undertaking. Mr. Akeley of the Museum staff devised a machine which, with compressed air, applied liquid stucco to the exterior surface. At first, and for several months, the result seemed undeniably successful both in holding to the plaster and in preserving a uniform color, but the lifeless plaster, the decayed fibre of the staff, would not hold the hardened liquid, and while the general appearance of the

building is much improved, it now seems that nothing ■■■ be done to protect or conceal the decomposing plaster and staff with which the brick walls of the building are covered.

During the year the Curator of the Department of Anthropology concluded ■■■ extended survey of the Far East and the Southern Pacific in furtherance of the plans of the Museum to extend the active operations of that Department into those fields. Further reference to this tour, and to the movements of the other Curators and other field work will be made elsewhere.

While the general subject of accessions will be considered in a subsequent part of the report, reference should specially be made of the acquisition by purchase of the well-known Strecker butterfly and moth collection, numbering 50,000 specimens, and including the notes and working library of the collector.

There has been but ■■■ change in the scientific staff. Dr. Arthur B. Lewis has been appointed Assistant Curator of African and Melanesian Ethnology during the year. The faithful performance of the forces of the Museum will be found reflected in the more detailed report following.

MAINTENANCE.—The Budget authorized by the Board of Trustees provided the sum of \$171,640 for the maintenance of the Museum for the year. The amount expended was \$147,510, leaving a satisfactory margin of \$24,130. In addition to this amount \$43,000 was expended by special authority of the Board of Trustees for collections, expeditions, and exhibition cases, bringing the total expenditure for the year to approximately \$200,000. The amount allowed for maintenance for the year shows ■■■ increase over the previous year. This is accounted for by the addition of several new members to the working force and extraordinary repairs to the Museum building.

LECTURE COURSE.—The usual two series of lectures have been given during the year, illustrated in each ■■■ and covering an unusual range of interesting subjects. The seating capacity of the hall in which the lectures are given has been taxed to its utmost on every occasion, in several instances the hall being filled and the doors closed thirty minutes before the announced time of the lecture.

Following is the twenty-eighth Lecture Course, with the subjects and lectures delivered during the months of March and April, 1908:

March 7.—"The Wilderness of Florida."

Prof. C. B. Cory, Curator of Zoölogy.

- March 14.—"Mt. Pelé and the Destruction of St. Pierre, Martinique."
Dr. Edmund Otis Hovey, American Museum of Natural History.
- March 21.—"Mosquitoes of Chicago and Vicinity."
Mr. Wm. J. Gerhard, Assistant Curator of Entomology.
- March 28.—"Holland's War with the Sea."
Prof. James H. Gore, The George Washington University.
- April 4.—"Treasures of the Mexican Mountains."
Prof. Rufus M. Bagg, Jr., University of Illinois.
- April 11.—"The Dominant Geographic Features of Wisconsin."
Dr. S. Weidman, Geological and Natural History Survey, Madison, Wisconsin.
- April 18.—"The Pacific Salmons' Struggle for Existence."
Dr. S. E. Meek, Assistant Curator of Zoology.
- April 25.—"Archæological Studies on the Coast of Ecuador."
Prof. Marshall H. Saville, American Museum of Natural History.

The following is the Twenty-ninth Lecture Course, delivered during the months of October and November, 1908:

- Oct. 3.—"Through the Cataracts of the Nile."
Prof. James H. Breasted, The University of Chicago.
- Oct. 10.—"A Naturalist in Venezuela."
Dr. N. Dearborn, Assistant Curator of Ornithology.
- Oct. 17.—"The Great American Deserts as Seen in New Mexico and Sonora."
Prof. Thomas H. Macbride, The State University of Iowa.
- Oct. 24.—"The Geology and Scenery of the Pipestone Region."
Prof. Samuel Calvin, The State University of Iowa.
- Oct. 31.—"Among the Birds in Costa Rica and Panama."
Mr. J. F. Ferry, Assistant, Division of Ornithology.
- Nov. 7.—"Life of a Lake in Summer."
Dr. Edward A. Birge, University of Wisconsin.
- Nov. 14.—"The Heraldry of the Indians."
Mr. James Mooney, United States Bureau of Ethnology.

Nov. 31.—"The Glaciers of the St. Elias Region, Alaska."

Prof. R. S. Tarr, Cornell University.

Nov. 28.—"Holland."

Prof. James Howard Gore, The George Washington University.

PUBLICATIONS.—The unusual amount of field work conducted by the Curators during the year and their consequent absence from the Museum, accounts for the small number of publications. The list includes three numbers of the established series:

Pub. 127.—Zoölogical Series, Vol. VII, No. 6. "The Zoölogy of Lake Amittitlan and Atatlan, Guatemala, with special reference to Ichthyology." By S. E. Meek. 47 pp., 19 illustrations (half-tones), edition 1,500.

Pub. 128.—Report Series, Vol. III, No. 2. Annual Report of the Director to the Board of Trustees, for the year 1907. 102 pp., 16 illustrations (half-tones), edition 2,500.

Pub. 131.—Zoölogical Series. Vol. IX. "The Birds of Illinois and Wisconsin." By C. B. Cory. (In press).

The Museum exchange list now numbers 1,264 names, of which 618 are in foreign countries and 646 in the United States and its possessions.

The following table shows the number of exchanges with each of the foreign countries:

Argentine Republic	11	Japan	7
Australia	29	Liberia	2
Austria	29	Mexico	17
Belgium	17	Malta	1
Borneo	1	Netherlands	15
Brazil	10	New Brunswick	1
British Guiana	1	New Zealand	6
Canada	28	Norway	8
Central America	6	Peru	2
Ceylon	2	Portugal	5
Chile	2	Roumania	1
China	1	Russia	19
Cuba	5	Spain	5
Denmark	4	Sweden	12
East Africa	1	Switzerland	14
Egypt	1	South Africa	11
France	55	Tasmania	2
Fiji Islands	1	Trinidad	1
Germany	127	U. S. Colombia	2
Great Britain	100	Uruguay	1
Greece	2	West Indies	2
Italy	32	Yucatan	2
India	17	Total	618

The following table shows the number of foreign exchanges receiving the different publications:

Anthropological	294
Botanical	312
Geological	334
Ornithological	186
Zoological	180
Report	618

The publications are distributed to the different States and Insular Possessions as follows:

Alabama	2	Nevada	1
Arizona	1	New Hampshire	5
Arkansas	1	New Jersey	16
California	32	New York	93
Colorado	13	North Carolina	5
Connecticut	24	New Mexico	2
Delaware	2	Ohio	22
District of Columbia	79	Oregon	1
Florida	1	Pennsylvania	39
Georgia	1	Rhode Island	3
Illinois	75	South Carolina	1
Indiana	12	South Dakota	2
Iowa	13	Tennessee	2
Kansas	9	Texas	2
Kentucky	2	Utah	1
Louisiana	4	Vermont	3
Maine	6	Virginia	3
Maryland	11	Washington	3
Massachusetts	71	West Virginia	4
Michigan	19	Wisconsin	17
Minnesota	11	Wyoming	2
Mississippi	2	Philippine Islands	2
Missouri	15	Porto Rico	1
Montana	3	Hawaii	5
Nebraska	7	Total	646

The following table shows the number of domestic exchanges receiving the different publications:

Anthropological	268
Botanical	329
Geological	347
Ornithological	182
Zoological	187
Report	646

LIBRARY.—Accessions during the year aggregate in volumes and pamphlets 2,973; by purchase 661, by gift and exchange 2,312, making the total number of books and pamphlets 47,487 among the libraries as follows:

General Library	34,211
Anthropological Library	1,861
Botanical Library	4,069
Geological Library	5,552
Zoological Library	1,104
Library of Exposition Literature	690

It is gratifying to report excellent progress in the Library; more books purchased, a larger exchange list, better conditions for work, and consequent better service to the Museum staff and to the public generally. The effort to secure some of the older literature of anthropology and botany is being continued and important works, difficult to obtain, have been added. For the Department of Anthropology there has been purchased a number of works on Africa and the Pacific Islands. On account of changes in the map it was necessary to reclassify the literature already in the library relating to these localities. For the Department of Botany a number of out of print works have been secured. Among the more valuable additions are the following works: Boott, Illustrations of the genus *Carex*; Hooker, *Exotic Flora*; Humboldt & Bonpland, *Voyage — sixieme partie, botanique*; Seeman, *The botany of the voyage of H. M. S. Herald*; Sloane, *Catalogue plantarum quas in insula Jamaica sponte provenient*; Vahl, *Eclogiæ Americanæ*. The largest single acquisition received during the year was that obtained with the Strecker collection of moths and butterflies, which was received, however, too late to be catalogued. This accession consists of 318 volumes and 947 pamphlets, and contains a number of rare entomological works which are valuable both historically and scientifically. A preliminary examination shows that there are a number of duplicates, which will be valuable for exchange material. With the purchase of the Proceedings and Transactions of the important entomological societies of this country the entomological library has been considerably strengthened. Through the courtesy of Mr. Kiralfy, Commissioner-General of the Franco-British Exhibition, London, the library received a collection of 89 catalogues and reports of the Franco-British Exhibition. The Superintendent of Documents, Washington, D. C., forwarded 195 publications of the U. S. Geological Survey that fill many gaps in the files of its publications in the general library. From the Board of Education, South Kensington, London, was received 29 volumes of miscellaneous publications. The Botanical Garden of Buitenzorg, Java, sent 57 volumes. Dr. John Coulter of the University of Chicago presented 25 botanical manuscripts; and Miss Alice Bache Gould of Boston an original edition of the *Flora de Filipinas*. The list of periodicals and serials received by gift and exchange from contemporary institutions, both domestic and foreign, increases in number and value from year to year. During the year 984 volumes and pamphlets were bound. The binding in plain black cloth of many back numbers of periodicals and serials





SYCAMORE.

(*Ficus sycamore*).

The sycamore tree, or Egyptian Fig, bears little resemblance to our own tree of that name except somewhat in the shape and gloss of the leaves. It is a true fig though the fruits are small. Sycamore figs require to be cut open at the free end to allow of the escape of small flies, born within, before the fruits can become sweet and edible; even then they are only eaten, in Egypt, by the poor who capify them for the purpose. The sycamore was symbolical of the "tree of life" in Egyptian cult.

"Zacharias . . . he ran before, and climbed up into a sycamore tree (to the top)". Luke xix, 4.

"But it was a beckman, and gatherer of sycamore fruit". Amos vii, 14.

"He destroyed their vine with hail, and their sycamore tree with frost". Job, xxviii, 47.

"As the sycamore trees that are in the vale, for abundance". 1 Kings x, 27.

(1898).

WALCOTT.

has added greatly to the convenience of the staff, also the purchase of substantial, practically dust-proof pamphlet boxes that preserve material that is valuable for reference but not sufficiently ■ to warrant individual binding. By miscellaneous gifts and exchange a number of duplicates have accumulated. An attempt is being made to systematize their disposal by sale or exchange. The progress of the work is necessarily slow ■ the regular work of the office consumes the time of the staff almost entirely. During the year two duplicate sets of World's Fair, 1893, literature were presented, one to St. Louis Public Library and one to the John Crerar Library. Monthly installments of the John Crerar Library card catalogue have been received, alphabetically arranged, and filed. 11,600 cards have been written and distributed in the various catalogues.

DEPARTMENTAL CATALOGUING, INVENTORING, AND LABELLING.—Owing to the absence of certain members of the staff of the Department of Anthropology less cataloguing has been done during the year than usually. Several important collections, however, have been catalogued, notably the collections acquired last year from certain islands of the South Pacific Ocean. About 1,200 catalogue cards were written during the year and entered in the inventory books, which now number 31. In addition there has been prepared certain classified tribal lists and a card catalogue has been prepared for the same. Individual labels have been written for specimens collected among the tribes of North- ■ Luzon ■ the first Robert F. Cummings' Philippine Expedition. A large number of specimens of the Higinbotham Corean Collection have also been labeled. Labels, copy of which was prepared by Dr. Newcombe during his connection with the Museum, have been printed, and added to the collections from the North Pacific coast, ■ rapidly as they were received from the printer. Over 50 ■ have been provided with case labels and numbers.

The cataloguing of incoming material in the Department of Botany has been kept up to date, all specimens entering into the organized collections having been properly and completely recorded. The total number of entries for the year in the 49 volumes of the Department is 17,980, making the total number of entries in the Department 237,780. A card catalogue of the lay names of plants and their economics has been commenced; this catalogue now contains about 10,500 references. In addition ■ this a card catalogue of the Department Library has been completed to date; this catalogue now contains some 4,100 cards.

The Curator of Geology reports, the most important work of labelling has been that of the systematic rock collection, Hall 66, the relief maps, Halls 76 and 77, and the gem collection in Higinbotham Hall. For the rock collection two kinds of labels were prepared, one showing for each specimen the kind of rock and locality, and the other descriptive labels of rock varieties. Eight hundred and seventy individual labels and seventy-four descriptive labels were thus prepared for these collections and installed. The labels made for the relief maps were descriptive in character and designed to indicate the most important geographic and topographic features illustrated by the maps. Sixteen such labels were prepared and installed. For the gem collection in Higinbotham Hall, labels were prepared which are uniform in tone with the mounting of the collection and avoid the scattered effect and loss of exhibition space which the loose labels hitherto employed involved. These individual labels correspond in size with the tablets upon which the specimens are mounted, and are printed on transparent paper. Each is fastened firmly over and upon the corresponding tablet. These labels show the name, locality, and in many cases the weight of the specimens exhibited. Six hundred and six such labels were prepared and affixed. In addition twenty-three labels descriptive of the different important varieties of gems were printed on transparent paper and mounted on white cardboard. In size they were 4 x 6 or 6 x 6 inches. They were placed in the cases adjacent to the corresponding gems. Five hundred and seven labels have been made and installed for the unlabeled specimens in the systematic mineral collection; three hundred and fourteen labels have been similarly made and placed for economic specimens and one hundred and thirty-eight for paleontological specimens. In addition copy has been prepared for four hundred and eighty-one individual and fourteen descriptive labels for the marble and building-stone collections, and one hundred and twenty labels for the paleontological collections. All specimens received have been numbered and catalogued, with the exception of such vertebrate fossils as have not been removed from the matrix. These are given field numbers only until cleaned, when permanent numbers are assigned them. In addition about fifty cards have been written for the catalogue of vertebrate fossils. The inventory books show the largest number of specimens for the year to have been recorded in invertebrate paleontology, the number in this section being 5,624. The total number of entries in all divisions is 6,074.

In order that the total number of entries may show the total number of specimens rather than ■ heretofore the total of the serial numbers of the inventory books, the number of specimens has been computed. The enumeration gives 98,979 ■ the total number of entries to date.

In the Department of Zoology the cataloguing of specimens has continued as usual, and the various collections received during the year have been properly inventoried and labelled, with the exception of the Entomological collections, to which more than 5,000 specimens have been added. Printed labels have been prepared and installed from time to time ■ new groups of animals have been completed and placed on exhibition.

The year's work on catalogues and inventorying is shown in detail as follows:

	No. of Record Books	Total No. of Entries to Dec. 31, 1908	Entries during 1908	Total No. of Cards Written
Department of Anthropology	32	94,140	1,120	98,530
Department of Botany . . .	54	244,742	24,179	.. . .
Department of Geology . . .	■	98,979	6,074	6,680
Department of Zoology . . .	40	73,129	5,570	28,618
The Library	12	64,921	7,791	76,085
Section of Photography . . .	6	69,418	9,895	.....

ACCESSIONS.—Practically all the accessions in the Department of Anthropology for the year have been derived from field expeditions, consequently they ■ of unusual interest and of great scientific importance. The collections secured by Dr. Berthold Laufer are especially noteworthy. Of great interest also are the collections made by Mr. Cole in the Philippine Islands of Luzon and Palawan, ■ a result of the second Robert F. Cummings' Philippine Expedition. Mr. Ayer placed the Museum under further obligations by securing interesting archaeological material of great value and importance from Egypt and Italy. Of especial interest ■ the two Mastaba tombs of the Fifth Dynasty, several Etruscan sarcophagi, and objects of bronze from Bosco Reali.

The Department of Botany has been fortunate in securing during the past year the Florida herbarium of Professor A. S. Hitchcock, consisting of a little over 7,000 specimens, most of which are from Florida, but containing also a few important individual sets of plants from the Bahamas and the West Indies. The principal collectors represented are: J. H. Barnhardt, A. C. Bedorsha, A. W. Bitting, A. A. Eaton, H. F. Henshall, A. S. Hitchcock, C. G. Lloyd, L. B.

Ohlinger, F. W. Pickell, A. L. Quaintance, P. H. Rolfs, P. H. Rolfs, and A. W. Bitting, J. H. Simpson, W. T. Swingle, H. J. Webber, and J. M. Westgate. The entire collection has been rearranged and incorporated in the organized part of the general herbarium. Further notable accessions to the herbarium during the year are the following: American Colony, Palestine, 261; W. H. Blanchard, Vermont, 163; J. W. Blankinship, Montana, 170; W. W. Calkins, Illinois, 115; C. Conzatti, Mexico, 356; Botanical Museum of Copenhagen: Iceland, Greenland, Mexico, etc., 150; R. A. Dixon, Texas, 324; Miss Alice Eastwood, California, 142; W. Garvens, Florida, 70, and New York, 109; Geological Survey of Canada: Dominion of Canada, Alaska, and Labrador, 1,552; Gray Herbarium, Bahamas, 285; J. Grinnell, California, 63; A. A. Heller, California chiefly, 2,249; E. J. Hill, Central States, 65; Iowa State College of Agriculture and Mechanic Arts, China, 118; W. A. Kellerman, Guatemala, 1,046; O. E. Lansing Jr., Illinois and Indiana, 92; New Mexico Agricultural Experiment Station, New Mexico, 204; New York Botanical Garden, Bahamas and West Indies, 1005; E. Palmer, Mexico, 244; R. Pilger, Paraguay, 176; H. H. Smith, Missouri, 626, and West Virginia, 339; W. N. Suksdorf, Washington, 296; U. S. National Museum, Mexico, 251. The most important herbarium additions are as follows:

Locality	Additions to Herbarium 1908	Total in Organ- ized Herbarium to Dec. 9, 1908
NORTH AMERICA		
Alaska	23	342
Canada (in general)	69	1,909
Alberta	268	284
British Columbia	474	690
Labrador	9	161
Manitoba	156	159
New Brunswick	—	564
Nova Scotia	43	145
Ontario	1	198
United States		
Alabama	2	734
American Plains	3	92
Arizona	18	3,540
California	2,150	13,598
Colorado	—	5,364
Connecticut	64	281
District of Columbia	6	1,814
Florida	5,751	15,681
Florida Keys	306	529

United States	Additions to Herbarium 1908	Total in Organ- ized Herbarium to Dec. 31, 1908
Georgia	608	3,633
Idaho	1	719
Illinois	217	15,782
Indiana	56	3,300
Iowa	8	1,277
Kansas	45	221
Louisiana	2	943
Maine	11	864
Massachusetts	11	2,049
Michigan	2	1,991
Minnesota	1	588
Missouri	16	642
Montana	173	2,945
Nevada	218	357
New Hampshire	4	937
New Jersey	23	1,420
New Mexico	227	1,831
New York	76	4,637
North Carolina	2	865
North Dakota	32	43
Oregon	55	4,109
Rhode Island	4	470
Rocky Mountains	27	727
South Dakota	7	84
Tennessee	11	663
Texas	338	3,959
Utah	4	543
Vermont	67	1,096
Washington	205	3,408
West Virginia	8	1,213
Wisconsin	7	741
Mexico (in general)	755	19,996
Lower California	5	1,385
Yucatan	175	4,794
Central America		
Costa Rica	5	371
Guatemala	1,136	1,884
Honduras	20	209
West Indies		
Bahamas		
Andros	44	1,260
Atwood Cay	67	67
Caiques Islands (Providenciales)	4	4
" North	51	51
" South (including Pine Cay)	111	111
" West	11	11

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West Indies:	Additions to Herbarium 1908	Total in Organ- ized Herbarium to Dec. 5, 1908
Bahamas		
Castle Island	21	21
Cat Island	61	428
Crooked Island	17	311
Eleuthera	17	593
Exuma (Harvest Cay)	16	16
Fortune Island	15	323
Grand Turk	3	60
Great Bahama	4	619
Great Ragged Island	68	■
Great Ragged Island (Hog Cay)	12	12
Hog Island	18	69
Inagua	26	490
Little Inagua	20	51
Mariguana	168	168
New Providence	274	1,944
Rose Island	4	65
Watling's Island	164	349
Barbados	18	323
Bermudas	■	476
Cuba	644	4,887
Dutch West Indies	7	7
Jamaica	194	4,283
Martinique	1	602
SOUTH AMERICA		
Paraguay	176	1,237
EUROPE		
Austro-Hungary	108	4,209
France	11	1,464
Germany	4	4,050
Italy	1	914
Russia	3	1,229
Spain	5	46
Switzerland	10	1,015
Africa	2	3,833
China	118	168
Palestine	279	1,106
Philippine Islands	10	1,078

The above tabulation does not represent the whole herbarium, only this year's additions thereto.

Important accessions by gift in the Department of Geology include casts of limb bones and feet of *Apatosaurus* from the Carnegie Museum of Pittsburg; Mammoth teeth and bones from Texas from

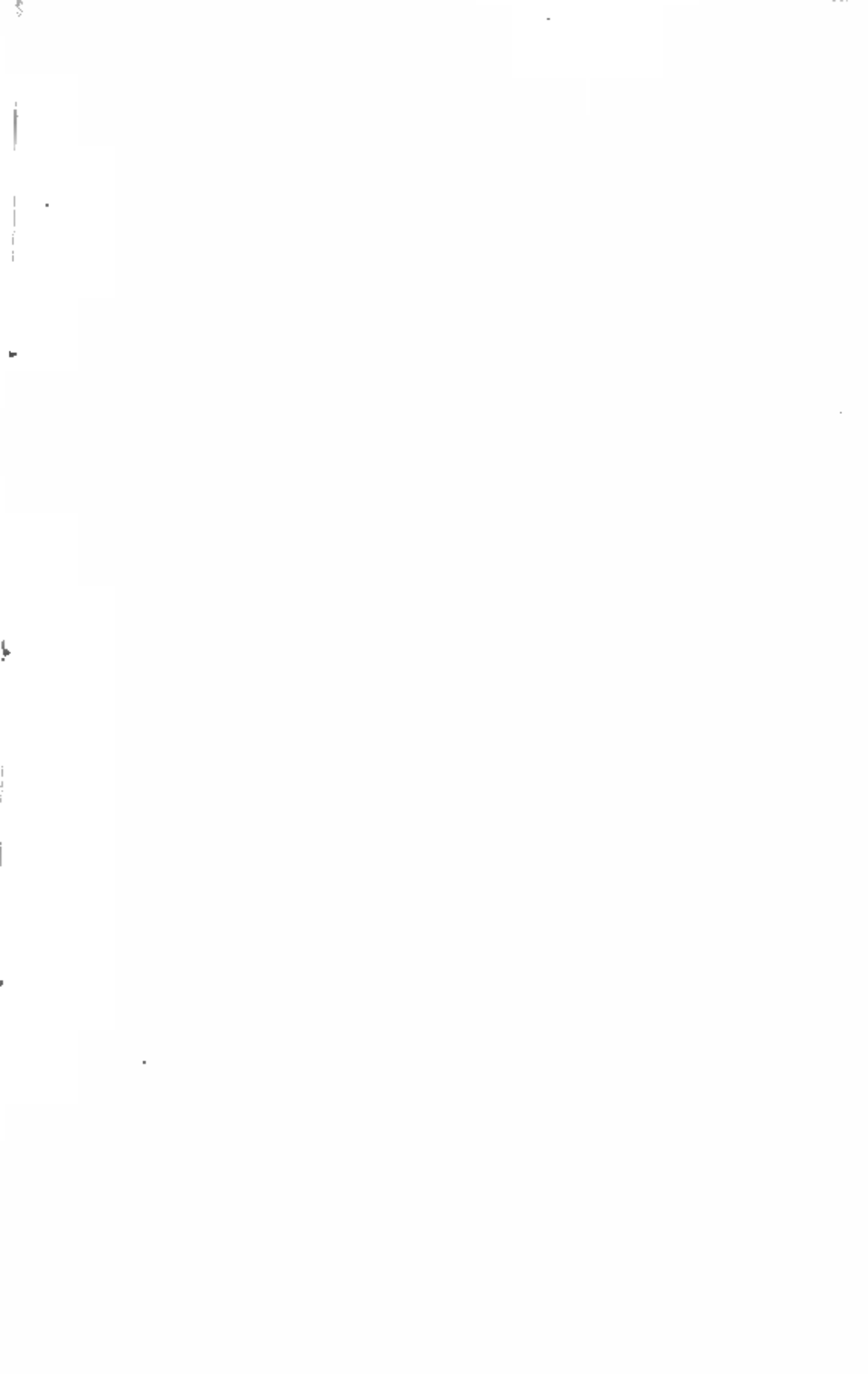
W. L. Albright; a jaw of *Smilodon* and remains of *Mammoth* also from Texas from W. L. Crawford, Jr.; six large slabs of marble from the Alabama White Marble Company; a relief map of Palestine from the Atlas School Supply Company; and a specimen of moss agate from Wyoming from B. Bridge. Exchanges made with several institutions and individuals afforded considerable new material, among which may be mentioned twenty-two specimens of Colorado rocks and minerals from the Colorado School of Mines; fifty-four specimens of the minerals of Pennsylvania from the Philadelphia Mineralogical Club; thirty-three large crystals of selenite from the Desert Museum, Salt Lake City, Utah, through Dr. J. E. Talmage; and one hundred and eighteen specimens of fossils, minerals, and rocks from E. L. Moseley of Sandusky, Ohio. The Colorado accessions included especially fine specimens of fluorite, covellite, molybdenite, geyserite, lithophysæ and spherulites; that from the Philadelphia Mineralogical Club noteworthy specimens of cyanite, anthophyllite, andalusite, and orthoclase, and that from E. L. Moseley representatives of *Macropetalichthys*, *Onychodus*, and other Devonian fishes, and specimens of *Zaphrentis*, *Cyathophyllum* and other Devonian corals. Among material purchased may be mentioned the Leighton meteorite, all of which was obtained, and sections of the Ainsworth and Williamstown meteorites; relief maps of Nebraska, the Catskill Mountains, Ottawa, Illinois, and Marshall, Missouri; two hundred and twenty-five specimens of vertebrate and invertebrate, chiefly Miocene, fossils from Patagonia; two hundred and thirty-seven specimens, representing sixty-eight species, of Devonian corals from the Falls of the Ohio; thirteen specimens of minerals and eight specimens of gold from the Raw Hide District, Nevada. The relief maps purchased, besides other features afford illustrations of stream robbing, old and young valleys, and a graded river. Especially important among the Patagonian fossils purchased are two skulls of the rare extinct ungulates, *Protypotherium* and *Icochilus*, lower jaws and part of a carapace of an extinct armadillo, and about twenty-five unusually well-preserved specimens of *Terebratella*. The series of Devonian corals purchased was selected from several thousand specimens of a collection made by G. K. Greene. Especially notable specimens are those of *Blotrophyllum decorticatum*, a cup coral about one foot in height; *Chonophyllum magnificum*, a large cup coral; the largest known frond of *Cladopora pinguis*; a large group of cups 18 inches in diameter and excellent single cups of *Cystiphyllum*

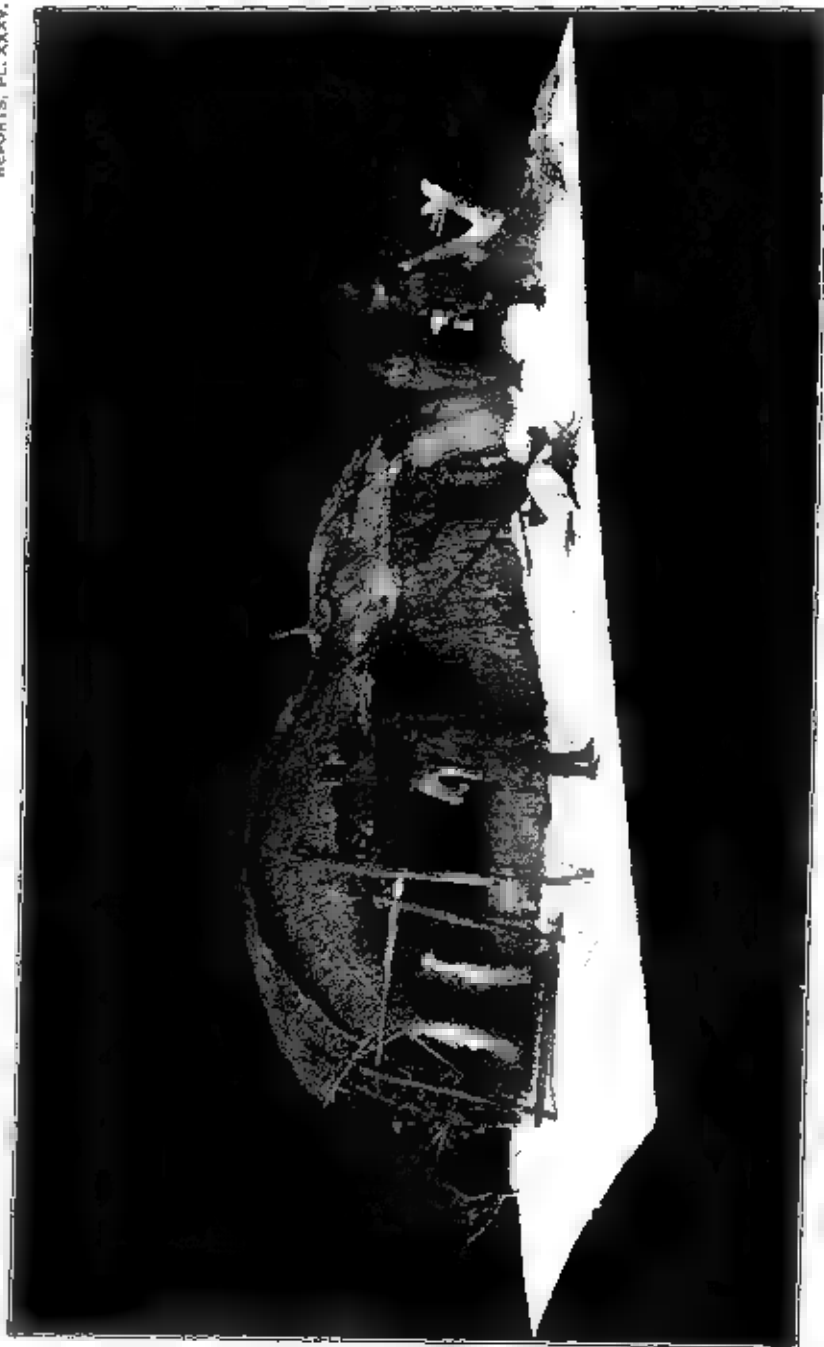
gemmatum; large single cups of *Cystiphyllum invaginatum*; two large groups of *Diphyphyllum* and *Haimnophyllum*, the latter 20 inches in diameter; perfect cups of *Heliophyllum convergens*, superior specimens of *Thecia ramosa*; and representatives of thirteen species of *Zaphrentis* unusually well preserved. By collection were obtained twenty-five specimens of the diamond-bearing peridotite of Arkansas; six specimens of gypsum and asphalt from Arkansas; about five thousand specimens of Cretaceous and Tertiary invertebrate fossils from Mississippi; one hundred and seventy-five specimens Devonian fossils and concretions from Michigan; and thirty specimens of vertebrate fossils from Wyoming.

In the Department of Zoölogy two hundred and twenty-six specimens of mammals have been added to the collection during the last year. Nearly all of these were secured by members of the staff while in the field. One hundred and nineteen were taken in Venezuela and adjacent islands and were either new or imperfectly represented in the collections. Valuable additions have been made in the Department of Ornithology, 3,643 skins and 2,717 eggs having been accessioned. Undoubtedly the most important acquisition to the Department of Zoölogy was the purchase of the butterfly and moth collection of the late Dr. Herman Strecker of Reading, Pennsylvania. The collection is probably unequalled in America and unsurpassed in importance by almost any other collection in any part of the world. It is contained in over eight hundred glass-topped drawers, which in turn are arranged in twelve large cabinets. Over fifty thousand specimens are represented, among them being three or four hundred types, co-types, etc. Besides the species described as new by Dr. Strecker himself, there are also all of Rearkirt's types, likewise types and co-types of species described by Grote, Behr, Staudinger, Skinner, Chapman, and Mengel. In addition to the above priceless specimens, there are many rarities found in but few collections, and in no other are there so many aberrations or monstrosities ■ well as remarkable examples of dimorphism, phases of insect development in which Dr. Strecker was deeply interested. The purchase included the arranged collection, all of the duplicates, the entire entomological library, and all correspondence relating thereto. The material was prepared for shipment under Assistant Curator Gerhard's directions and transported without loss or mishap to the Museum, where it has been arranged in the same order as it was at the time of Dr. Strecker's death seven years ago.

EXPEDITIONS AND FIELD WORK.—Mention ■ made in the report of last year of the work being done by Mr. Cole in the Philippine Islands in connection with the Robert F. Cummings' Philippine Expedition. Mr. Cole returned to the Museum in December after two years of research. The greater portion of his time was spent among the Tinguians, a pagan mountain tribe of Northwestern Luzon, numbering about twenty thousand persons. They possess domestic animals, have extensive rice fields, and live in compact villages. Until recently the custom of head-hunting made loose federations among groups of villages necessary, and thus a number of dialect groups have sprung up, but the general culture is quite uniform. A peculiar but highly developed form of spiritualism, combined with an elaborate ceremonial life is found throughout the territory. Along the northern border of this section the people are excellent iron workers, turning out the greater portion of the spears and headaxes found in Northern Luzon. The most famous forge—that of Balbalasang—was secured and is now in the Museum. Mr. Cole visited nearly every village of this tribe in the provinces of Ilocos Sur, Ilocos Norte, and Abra, and also made extensive trips through the subprovinces of Kalinga and Apoyoa. The people along the Apayao river are ■ of the wildest and least known of the Islands. They have made numerous raids on the villages of the lowlands and have, until recently, refused all intercourse with the Spaniards and Americans. The collection from this section is the only ■ ever secured from this people. In each locality Mr. Cole spent sufficient time to make a study of the social and religious life of the people; their mythology, folklore, and language. There was also secured about seven hundred photographs showing the people in portraits and at their industries, their ceremonies and places associated with their religion; dwelling and other buildings and the country in which they are located. The views are supplemented by field maps covering the entire region visited. About five hundred physical measurements were secured, a series of life masks, and phonograph records of the various songs and instruments. Before leaving the Islands Mr. Cole spent ■ month among the Bataks, an almost unknown pigmy tribe found on the island of Palawan. These people live in groups of two or three families; they build only the rudest shelters, which are abandoned at pleasure. Little is attempted in agriculture ■ they live on roots and herbs and animals secured in the chase. Their weapons are the bow and arrow and the blow gun. A poison dart is shot from the

latter and because of their proficiency with the weapon the Batacs are greatly feared by the "civilized" natives of the coast. In company with Governor Miller, Mr. Cole visited parts of the island hitherto unknown to white men. Many photographs, phonograph record-measurements, and a typical collection, were secured. The collection from the sections visited by Mr. Cole numbers two thousand specimens and includes all the articles used in daily life and religious ceremonies. Dr. Wm. Jones has devoted the entire year to the investigations of the unknown tribes in the upper headwaters of the Cagayan Valley. Previous to his entry into this territory he had investigated certain tribes on the Lower Cagayan. Dr. Jones' investigations are in connection with the Robert F. Cummings' Philippine Expedition. For certain reasons it does not seem advisable at this time to comment at any length on the investigations of Dr. Berthold Laufer. Suffice it to say that at the present writing he is in China and that he is meeting with very great success. It may be noted in this connection that in addition to the work which he is performing for the Museum he is engaged in the purchase of Chinese and Tibetan literature on behalf of the Crerar and Newberry Libraries. It is Dr. Laufer's belief that Chicago at the present time possesses a Manchu Library more valuable than any to be found in Europe, not even excepting the one in St. Petersburg, which has great treasures from this field. The extensive collection of Chinese books, which Dr. Laufer has collected, is very rich in fine old editions of the Ming Dynasty and affords a perfect exhibit of the development of Chinese printing. The Curator of the Department spent the year in a hurried journey around the world. Leaving New York January 11th, he visited Cambridge, London, Berlin, and Rome, and proceeded direct to Cairo where he joined Mr. Edward E. Ayer and remained in Egypt five weeks; then he spent seven weeks in India, two in Ceylon, and next visited Java where an extensive collection was made. After visiting the Australian museums of Perth, Adelaide, Melbourne, and Sydney, he proceeded to Simpson Hafen, Bismarck Archipelago, from which port he sailed on a month's cruise with the Governor of German New Guinea, Dr. Hahl, visiting many villages in New Ireland and adjacent islands and the two German islands of the Solomon group—Buka and Bougainville. Returning to Simpson Hafen from the Solomon Islands, a month was spent along the coast of German New Guinea, ascending the Kaiserin Augusta River. He then proceeded to Manila, via Yap, the chief





HOUSE GROUP, WINTER, SAUK & FOX INDIANS, IOWA.

of the Caroline Islands, and devoted a month in Luzon in connection with the Robert F. Cummings' Philippine Expedition. Returning home from the Philippines via China and Japan and the Hawaiian Islands, he visited on the way Canton and Peking. As a result of this expedition the Museum has received about 80 ■■■■ of material and several hundred photographs.

The Assistant in Dendrology has completed two periods of field work on North American Forest Trees, during the past year, his Spring work being completed in southern Missouri and begun in West Virginia, and his Autumn work completed in West Virginia. As a result ■ large amount of valuable material has been added to last season's accumulation which is now curing in preparation for installation. There was also secured, in addition to the timber specimens, ■ valuable series of tree photographs, fruit and herbarium specimens, as well as accessory material for the systematic collections of the Department in general. The Curator has made two extended trips to the museums of Europe, visiting Ireland, Scotland, England, Holland, Germany, Austria, Italy, Sicily, Switzerland, France, and Belgium. Resulting from this work is an extensive series of photographs, exhaustive notes on museum technique, and valuable comparisons and studies made of type species. Mr. O. E. Lansing, Jr. has continued his field work in the Lake Chicago Basin during the past season, adding largely to the series of plants already secured to represent this vanishing flora.

Early in June about ten days were spent by the Curator of Geology in the newly discovered diamond fields in Pike county, Arkansas. All the important outcrops of the diamond-bearing peridotite were visited and specimens obtained. In addition the gypsum and asphalt beds in the vicinity were visited and specimens of their products collected. The Assistant Curator of Paleontology in the latter part of the season, with two assistants, spent about two months continuing in eastern Wyoming the collection of Loup Fork Miocene fossils. Most of the work was done in the vicinity of Raw Hide Buttes, Wyoming, and a considerable amount of important material ■■■■ obtained. Among this were some excellent skulls of the rare form *Moropus*, a nearly complete skeleton of *Procamelus*, some rhinoceros skulls, and specimens of Miocene horses. Collecting of Cretaceous and Tertiary invertebrate fossils was carried on by the Assistant Curator of Invertebrate Paleontology in Mississippi during April and May. The principal Cretaceous collections were made

in the vicinity of Ripley, Mississippi, where several hundred specimens were obtained. Collecting in this locality has hitherto been very unsatisfactory, owing to the rapidity with which the specimens decomposed after removal from the soil. In order to obviate this difficulty the Curator employed a device which permitted covering the specimens with paraffin, immediately upon their removal. In this way the specimens obtained were well preserved and the collection is probably the first large one of permanent value that has ever been secured of these fossils. At Pontotoc a fine series of fossil oysters, echinoids, and shark's teeth was collected, numbering six hundred and twenty-two specimens. Of these the echinoids were exceptionally fine and at least four of the species are new. The Selma beds of Houston yielded four hundred and eighty-six specimens of invertebrates representing sixty-five species, and a sandy limestone in the vicinity two hundred and thirty-one specimens representing twenty-five species. The collecting of Tertiary fossils was carried chiefly in the vicinity of Vicksburg and about thirty-two hundred specimens representing one hundred and fifty species were secured. While the work of collecting here was considerably interfered with by excessive rains and high water, the amount of material obtained was on the whole very satisfactory. The assistance of Dr. Crider, State Geologist of Mississippi, Professor Sullivan of Millsaps College, and Professors Lowe and Brown of the State University, is gratefully acknowledged in connection with the work. About twenty photographs illustrating the formations were made and a considerable amount of modern molluscan material secured and transferred to the Department of Zoology. At Traverse Bay, Michigan, the Assistant Curator of Invertebrate Paleontology also collected one hundred and twenty-eight specimens of Devonian corals, sponges, etc., which on polishing exhibit especially well-marked structure. A series of peculiarly eroded pebbles was also secured at this locality.

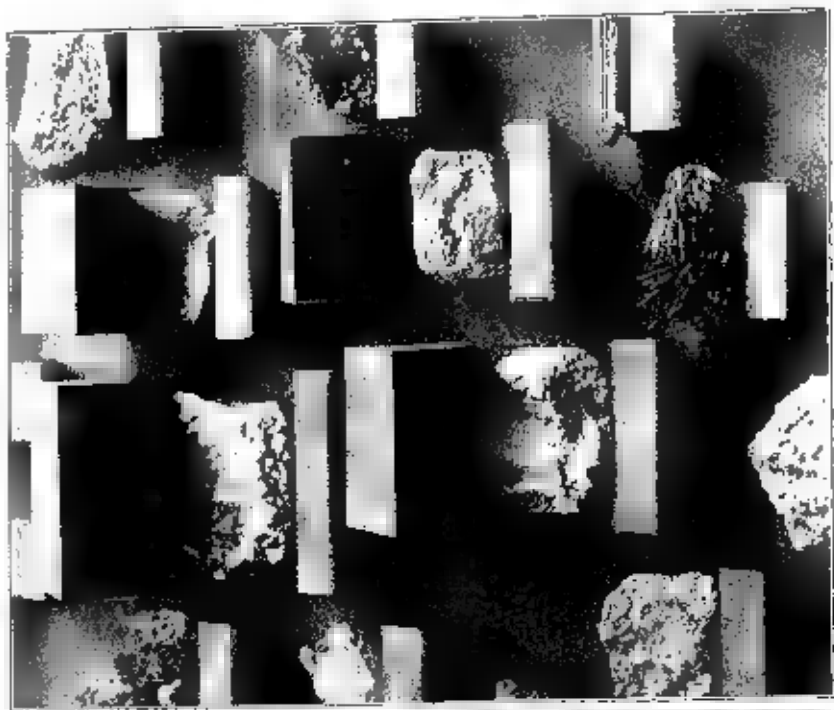
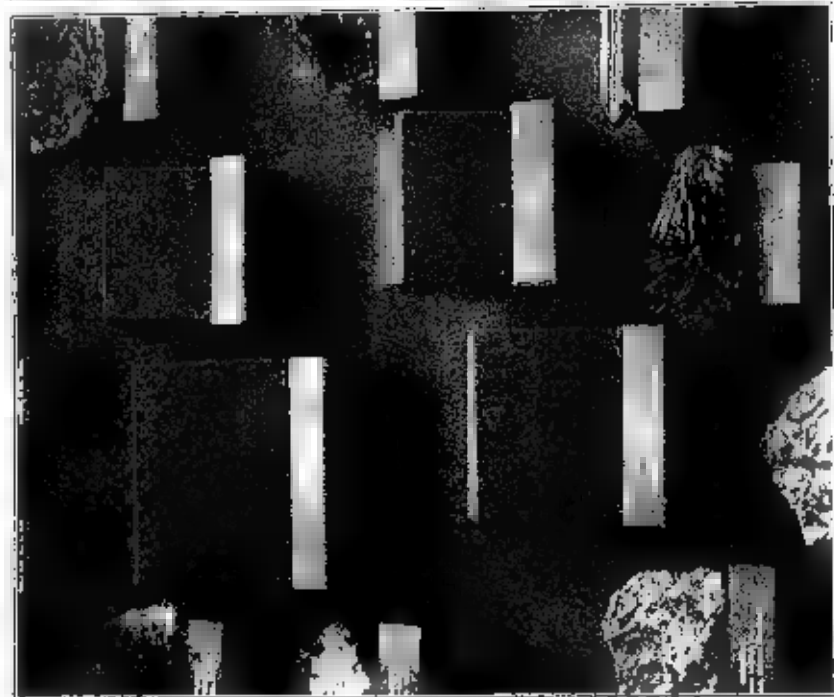
The results of the expeditions in the interest of the Department of Zoology to Central America, and Venezuela, South America, including adjacent Islands, during the early part of 1908 by Messrs. Dearborn and Ferry, proved most satisfactory. Their combined collections contained 3,215 bird skins of which Mr. Ferry secured 2,100. A fine series from the Dutch islands of Curaçao, Oruba, and Bonaire were nearly all new to the collections. During the summer Mr. Ferry made several short collecting trips to local points in Illinois and one to northern Wisconsin, the results of which added 90 specimens,

many of which were missing from those localities. Much attention has been given to securing a series of fresh water fishes for exhibition purposes, and in this connection the Assistant Curator, Dr. Meek, made visits to desirable localities in Illinois and adjacent states, usually in company with Mr. Heim, taxidermist, with the result that valuable material was procured and added to the collection. During the months of May, June, and July frequent visits were made by Dr. Meek and Mr. Heim to Pine and Millers, Indiana, to secure specimens of the large commercial fishes taken at these places by the fishermen. These visits and some collecting done in streams and small lakes near by resulted in securing 76 skins. Of these 9 are mounted and finished, 25 are mounted but not finished, and the remainder is unmounted. The skins include 18 species. During the first three weeks of September several places along the Illinois River were visited where considerable commercial fishing was being done. At these points 98 fish skins of 25 species were secured. Dr. Meek, Mr. Freisser, and Mr. Hildebrand spent two days collecting in the Fox River at McHenry, Illinois, securing 12 skins representing 6 species. During his vacation in October Dr. Meek spent two days on Lake of the Woods in northern Minnesota and prepared and shipped from there to the Museum 32 specimens of large fishes representing 7 species. On the same trip he spent two days on Lake Superior at Marquette, Michigan. One lake trout weighing 25 pounds and one weighing 10 pounds, and a ling of 12 pounds were sent to the Museum. No extended field trips were made during the year for the Division of Entomology but, as usual, a fair amount of local collecting was done both by the Assistant Curator and his assistant, special attention having been given to the species of Illinois. As a result of similar collecting during previous years, the insect fauna of northern Illinois is now fairly well represented in the Museum's cabinets. From the middle and southern portions of the State, however, little material has as yet been obtained. Several acquisitions were made by means of three non-entomological Museum expeditions. The most noteworthy material received in this manner was that collected by Dr. Dearborn in Venezuela. Mr. Slocum of the Department of Geology also took some insects in Mississippi, and Mr. Ferry likewise brought with him a few interesting forms gathered in Costa Rica, Panama, and Venezuela. The following is a list of the expeditions:

Locality.	Collector.	Material.
Costa Rica, Panama, Islands of Curaçao, Oruba and Bonaire	J. F. Ferry.	Bird and Mammal Skins.

Locality.	Collector.	Material.
Egypt, India	Geo. A. Dorsey,	Archæological material from Egypt, Ethnological material from India, Ceylon, Java, Australia, New Ireland, Buka, Bougainville, New Guinea, and the Philippine Islands.
Assam, Ceylon		
Java, Australia		
Bismarck Archipelago		
Solomon Islands		
New Guinea		
Philippine Islands		
China and Japan		
Venezuela and Curaçao	N. Dearborn,	Bird and Mammal Skins.
Mississippi	A. W. Stocom,	Invertebrate Fossils.
Missouri	H. H. Smith,	Timbers.
McHenry, Fox River and Illinois River	S. E. Meek,	Fishes.
Woodruff, Wisconsin, and Cook Co., Illinois	C. B. Cory,	Bird migration and studies for groups.
Arkansas	O. C. Farrington,	Ores and Minerals.
West Virginia	H. H. Smith,	Timbers.
Fox Lake, Illinois	C. L. Dewey,	Material for groups, birds, and nests.
Fox Lake, Illinois	L. L. Pray,	Birds and eggs.
Woodruff, Wisconsin	J. F. Ferry,	Birds and eggs.
Wyoming	E. S. Riggs,	Vertebrate Fossils.
Lake of the Woods, near Lake Ontario	S. E. Meek,	Fishes.
Local and Northern Illinois	J. F. Ferry,	Birds.
Sikkim and Bhutan	B. Laufer,	Thibetan Ethnology.
Philippine Islands (R. F. Cummings' Expedition),	F. C. Cole,	Ethnological material from Tinguans, Apayaas, Kalingas, Amurayans, Bataks, Tagbanaus.
Andaman Islands	Alfred R. Brown,	Ethnological Material.
Philippine Islands (R. F. Cummings' Expedition)	William Jones,	Mayayo, Igorot, and Ibalas.

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT.—The acquisition during the last few years of varying amounts of material from several tribes of North America rendered it necessary that the collections from these tribes be reinstalled, thus there has been placed on permanent installation during the year collections from the following tribes: Kiowa, Blackfoot, Sauk and Fox, Iroquois, Micmac, Ottawa, Menominee, Chippewa, Sioux, Seminole, Cheyenne, Arapaho, Zuni, and a few California tribes. For the first time in the history of the



METHOD OF EXHIBITING FADABLE MINERALS.

The minerals are covered by boxes which may be raised by pressing a button placed on the outside of the case. The left-hand view shows the minerals covered; the right-hand view shows the covers raised by pressing the button. On releasing the button the covers return to place. The minerals are thus protected from the fading effects of light.

Department of Anthropology the collections from Africa have been thoroughly overhauled and have been entirely installed. They now completely occupy Halls 50, 51, 52, and part of 53. Owing to the acquisition of additional material from Egypt, changes have been made necessary in the Egyptian Hall. New cases have been provided and much of the material has been reinstalled. The ancient mortuary boat has also been provided with a suitable case. The lack of floor space has made impossible certain rearrangements and the installation of certain collections which were designed, and as ■ consequence a certain amount of confusion prevails in the corridors leading to the East Annex. With the addition of the collections brought from the Philippine Islands by Mr. Cole and the probable receipt of additional material from Dr. Jones, it becomes necessary to secure additional space for the exhibition of these collections. During the year several miniature groups have been prepared and placed on exhibition. Two of these represent important ceremonies among the Pawnee, while two depict the summer and winter habitations and indoor and outdoor life of the Sauk and Fox Indians of Iowa.

Two of the cases containing gems in Higinbotham Hall have been relined with silk and the specimens reinstalled. In Hall 35 installation of the great dinosaur torso has been completed, the hall having been opened to the public about the first of August. The torso has been mounted ■ as to stand upon ■ base 12 ■ 30 feet, with a rail surrounding the base at a distance of two feet. Above the base the mount rises to ■ height of 15 feet. The skeleton is shown from the shoulders backward to the middle of the tail. It includes more bones of ■ individual dinosaur of this size than is known at present to be exhibited in any other museum. The contiguity of the bones as found also makes this skeleton important in giving positive evidence regarding the structure of these animals. A large descriptive label, drawings of ■ complete skeleton and restored forms, and a photograph showing method of quarrying the bones ■ exhibited in connection with the skeleton. The courtesy of the Carnegie Museum of Pittsburgh, through Director W. J. Holland, is acknowledged in providing casts of foot and limb bones for use in the mount. In addition to the dinosaur mount five new wall cases 7x12 feet in size have been added to the hall and in these the Jurassic dinosaur material formerly exhibited in other halls has been placed. This material includes vertebræ, sacrum, and limb bones of Brachiosaurus, scapulæ, vertebræ, foot, limb, and pelvic bones of Morosaurus, and vertebræ, scapula, and femur of Dip-

iodocus. The exhibits of the Hall ■■■ for the most part, therefore, illustrative of dinosaurs. The collection illustrating modes of petrification and comparisons of living and extinct forms has also been installed in this hall. It occupies three wall ■■■■. The transference of the dinosaur and other material gave opportunity for rearrangement of the paleontologic collections as a whole, which was improved. Three new wall ■■■■ added to Hall 33 and the collection there completely rearranged. About one hundred large specimens of cystoids, crinoids, trilobites, etc., ■■■■ added to the Silurian series on exhibition, and about two hundred specimens of corals, brachiopods, paleocypods, etc., to the Devonian. To the Carboniferous series about three hundred and fifteen specimens of crinoids mounted on tablets were added, filling one floor case. This material was obtained for the most part from the collection purchased from Mr. Fultz. The Triassic fossils were also moved from Hall 36 to Hall 33 and installed. By this rearrangement it was made possible to devote Hall 36 almost wholly to Jurassic fossils. Two ■■■■ of Jurassic plants and invertebrates were reinstalled in this hall and two ■■■■ of Jurassic ichthyosaurs and one of Jurassic fishes transferred from Hall 59 to Hall 36. The Cretaceous collections were moved to the east end of Hall 59 and new Tertiary vertebrates and invertebrates thus afforded room in their proper sequence. Among ■■■■ specimens of Tertiary vertebrates installed in Hall 59 may be mentioned two large nodules from the Loup Fork of Wyoming showing remains of the fossil horse *Hypohippus* in the matrix, and several skulls of recently purchased Patagonian fossils. Two of the two-foot wall cases in ■■■■ 61 were replaced by three-foot cases and in them were installed the series of *Titanotheres* and ■■■■ other large skulls. Some rearrangements ■■■■ also made of the floor exhibits in Halls 59, 60, and 61. In Hall 63 devices have been provided to permit exhibition of minerals that would fade on exposure to light. These, although they include some of the most showy and interesting specimens, had hitherto been necessarily kept in drawers away from public observation. The device provided for each specimen consists of a box of black cardboard, which is hinged and placed over the specimen so ■■■■ to entirely exclude the light except when it is desired to examine it. A series of levers connected with ■■■■ button placed on the outside of the ■■■■ permits raising of the box by pressing the button. On releasing the button the box drops back into place and covers the specimen again. The specimens are thus protected from light except for the moment when the visitor wishes

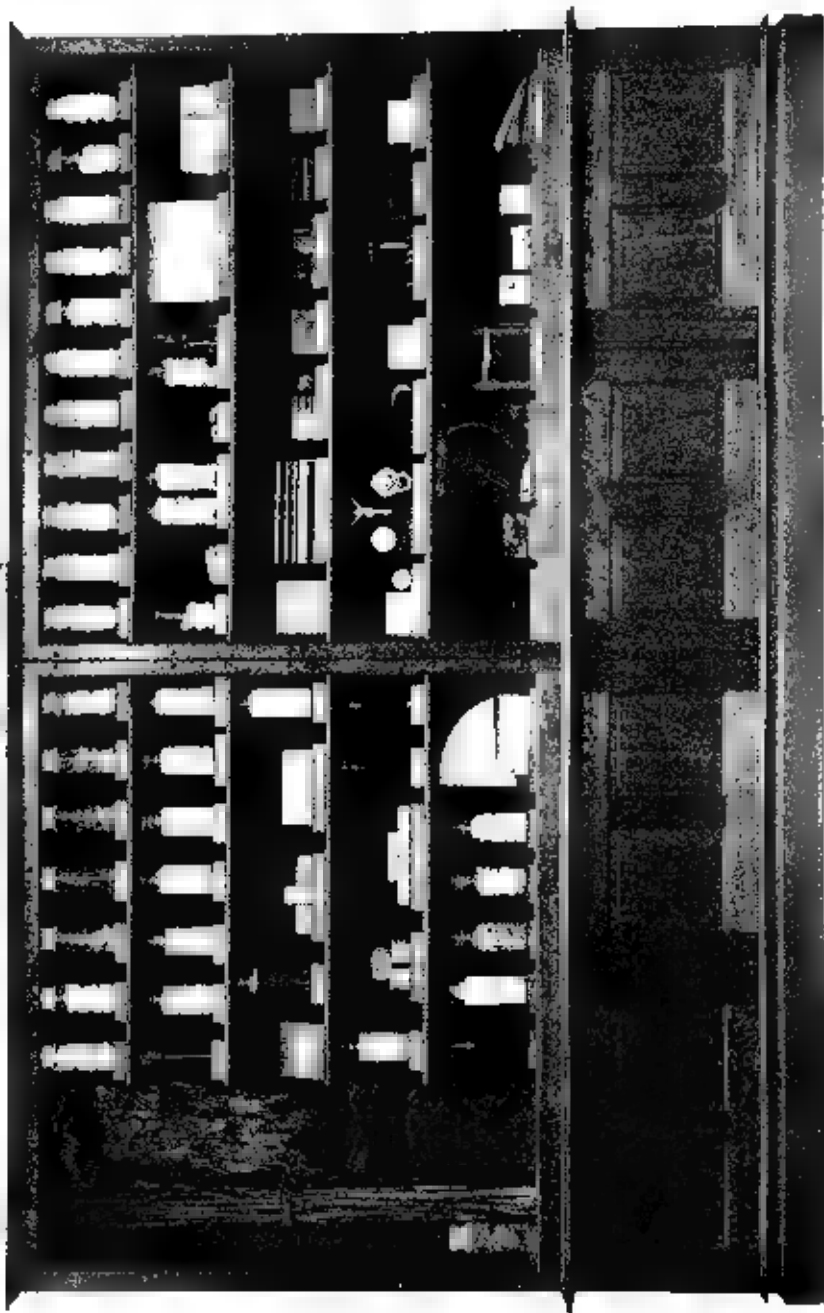
to examine them. When several specimens which it is desired to protect occur in one case the levers on the different boxes are connected with a rod so that a single button connects with all the boxes in the case. A single pressure of the button thus permits examination of all the specimens at one time. Protective devices of this kind were provided for all the important specimens of orpiment, realgar, topaz, rhodonite, proustite, and lorandite, and it is proposed to add others. New specimens have been installed in the mineral collection ■ received and individual pasteboard trays have been provided for a number of fragmental specimens. Twenty storage drawers have been added to the cases in Hall 64. Studies made of specimens of the mineral collection during the summer by the Curator and Mr. E. W. Tillotson, Jr., resulted in finding ■ number of new crystal forms and habits. These include one new form of bertrandite, two of calcite, three of linarite, two of olivenite, one of octahedrite and three of orpiment. A new axial ratio ■ found for olivenite and new habits observed for anglesite, barite, bertrandite, calcite, leadhillite, linarite, mimetite, octahedrite, olivenite, orpiment, realgar, rutile, and sphalerite. In Hall 65 a wall case of stalagmites has been installed, especially notable specimens being a series of marcasite stalactites from Galena, Illinois, which were collected a number of years ago and presented to the Museum by Elizabeth E. T. Sawyer, two large stalagmites from Missouri, and a series of cave formations from Crystal Cave, South Dakota. The stalactites installed in this case had been mounted in normal position, being hung from shelves by hooks inserted in the base of each stalactite. A number of fulgurites have also been installed in this case. Other specimens newly placed on exhibition in this hall include a number of groups of concretions, various erosion forms, and two large slabs of orbicular gabbro and granite. A cave exhibit illustrating the occurrence of a large selenite deposit in Utah is also being constructed in this hall. The installation of the systematic rock collection in Hall 66 has been completed, about fifteen hundred specimens having been placed on exhibition. The specimens are installed on individual blocks and fill eight floor cases. Of these the igneous rocks occupy four cases, sedimentary rocks two cases, and metamorphic rocks two cases. Descriptive labels have been placed in the cases in addition to the individual labels with a view to making the collection as instructive as possible. Eight wall cases in the hall have also been installed in part. These contain the series of rocks of Manhattan Island and the iron-

bearing regions of Lake Superior, large specimens of basalts, lavas, slates, etc., and several series of structural specimens illustrating dendrites, jointing, faulting, folding, cementation, etc. In Hall 67 in addition to the specimens of marbles and building stones previously reported ■ installed, about one hundred specimens which had been obtained from various ■ and not hitherto exhibited on account of being of unsuitable size have been reduced to standard sizes, polished, and placed on exhibition. Six Alabama marbles in polished slabs 9 x 16 inches received by gift form another valuable addition to the collection. At present the collections exhibited in this hall include over seven hundred specimens installed in eight wall cases, four center cases of the type of the wall cases, and nine table cases. Of these specimens four hundred and seventy-one ■ polished marbles and decorative stones. These consist chiefly of polished slabs either ■ x 16 inches or ■ x 18 inches in size, although material both larger and smaller is included. This collection occupies four of the wall and center ■ and four of the table cases. American marbles fill three cases, Norwegian one-half case, English and Irish one and one-half cases, Greek and Italian one case, and French two cases. Of other decorative stones verte antique occupies ■ wall case, and Mexican onyx and alabaster two cases. The four table cases are occupied by miscellaneous polished marbles, verte antique, Mexican onyx and other decorative stones in various ornamental forms. The remaining five table cases are occupied by the collection of building stones consisting of two hundred and forty four-inch cubes. Of these, granites, limestones, and marbles each occupy one case, and sandstones, including lavas, occupy two cases. Hall 68, containing the collection of clays, soils, etc., has also been completely recased and reinstalled. The cases consist of four wall cases and sixteen table cases. Of these the clay collection occupies twelve table cases and half ■ wall case, the soil collection four table cases and ■ wall case, sands and cements one wall case, clay-like minerals half a wall case, and mineral pigments one case. The clay collection is divided into two parts, a synoptic and ■ general collection. Of these the synoptic collection is installed in four table cases, upon the floors of which diagrams show the derivation and relationships of the various classes of clays. In proper position upon the diagrams are placed specimens of each group of clays. This classification separates the clays into twenty-eight groups, the numbers of which are similar in origin and industrial application. The general collection of clays, numbering at present five hundred and fifty speci-

mens from different localities, is also arranged to correspond with this classification. In addition a small collection shows the influence of various foreign matters upon the plasticity, shrinkage, color, and other properties of clay. The collection of soils numbers at present ■ hundred and fifty-five specimens. Of these a collection illustrating the derivation of soils from several kinds of rocks, and a collection of the essential and incidental components of soil fill two table cases. In these cases is also placed ■ collection of plant foods as found in soils and one illustrating the characteristics of the wider and well-recognized groups of soils. A collection of fifty-four soils and subsoils arranged according to the special classification adopted by the U. S. Department of Agriculture occupies one wall case, and ■ collection of soils from all parts of the world arranged according to the familiar groupings of loams, marls, etc., occupies two table cases. The sands and cements which occupy a wall case are arranged according to their industrial applications, being grouped as glass sands, molding sands, etc. Trays or jars are employed for the installation of the specimens in this hall, according ■ a vertical ■ horizontal position is desired. A number of additions were made to the collection of relief maps in Halls 76 and 77 and the collection rearranged. The work of framing the maps of the collection was also continued and is now nearly completed, forty-two large maps being at present framed. Smaller maps, which could not readily be framed, were placed in floor cases, three of which were provided for the purpose. Photographs of typical ancient shore lines of Lake Chicago and other topographic features in the vicinity of Chicago, made by the Curator, have been installed adjacent to the relief maps of the region. Complete descriptive labels have been made for a number of maps and have been attached to them in such a way ■ to be conveniently read while examining the map. This has been accomplished by mounting them over the map in many instances and hinging them so that any portion of the map covered by the label can be seen by swinging the label. In Hall 78 the old cases and platforms have been replaced by new cases throughout, so that all the exhibits are now under glass. The large specimens formerly exhibited near the walls have been brought forward to the center of the hall and prominently displayed in three upright cases. These cases are 40 inches square and 69 inches high. They have glass on all four sides and the top, so that their contents are visible from all parts of the room. The central case of these is occupied by large blocks of bright-colored rubellite, and those on either side contain monoliths

of fluor-spar and apatite. About these are grouped seven table cases. Three of these cases contain groups of specimens showing stages of the manufacture of soda from salt by the Le Blanc and ammonia processes. The specimens of these collections are arranged with guide lines to assist in following the process. Two table cases contain a collection illustrating the uses of asbestos, which was formerly displayed in a large upright case in the center of the hall. Another table case contains a collection of barytes and another a similar collection of fluor-spar. About the walls of the hall eight wall cases similar in design to those employed for the mineral collection have been placed. As the lighting and capacity of these differ from those discarded, appropriate changes in the order of arrangement of the collections were made. Two wall cases eighteen inches deep upon the south wall contain potash compounds, including a large collection of the salts mined at Stassfurt, Prussia. In these ■■■ have also been placed such other specimens as were too large for the shallower cases. These larger specimens include blocks of gypsum, epsom salt, rock salt, and phosphate rock. The remaining wall cases are twelve inches deep. Of these the borate and nitrate collection occupies half of the case and the other half is occupied by the salt collection. Magnesian and similar minerals of economic value occupy about a quarter of a wall case and the remaining three-quarters contain the sulphurs. Abrasives arranged according to their uses occupy a wall case and a half, and half a wall ■■■ contains the collections of crude asbestos. Mica occupies half a case and the phosphates, grouped according to a mineral and commercial classification, occupy one wall case and nearly half of another. Among minor details of installation in this hall it may be noted that flat black trays have been employed for powdered and granular exhibits in place of the buff trays formerly used. An increased number of black wood specimen supports have been employed and a new pattern of label holder is employed for all labels in the wall cases. Hall 80 has been thoroughly repainted and calcimined and Halls 70 and 71 have been dismantled and calcimined in preparation for a recasing of the collections. As soon ■ the installation of these halls and that of a single additional hall, Hall 71, is completed, permanent cases will have been provided for all of the collections of the Department. Comparing the distribution of the collections at present with that existing at the time of the opening of the Museum, it appears that six halls are now devoted to the paleontological collections instead of three, as at that time.

THE MUSEUM'S GLOSSY
COTTON.



TYPE OF ECONOMIC CASES. DEPARTMENT OF BOTANY.

One of a series of four illustrating the *Melocotyl*. This case presents various products of the cotton plant (*Gossypium* sp.).

Marbles and building stones now occupy one hall instead of two, and the metallurgical collections previously occupying one hall have been discontinued ■ ■ group. In connection with this change in the distribution of the specimens ■ large increase in their number has been effected. Thus the paleontological collections now number about 60,000 specimens instead of 20,000, the number of meteoric falls represented has been increased from 180 to 300, the number of minerals in the systematic collection from 5,000 to 15,000 and the economic collections show a net increase of about 5,000 and a total of over 15,000 specimens. Two hundred and five prints have been added to the Department photograph albums since the last report, making a total of 2,193 prints now in these albums. In the chemical laboratory ■ case has been built for keeping additional apparatus and in the office of the Department one for some of the larger pieces of physical apparatus. Two storage cases have been added to the paleontological laboratory and fitted with wooden trays. Owing to work upon the dinosaur mount less opportunity than usual was afforded for cleaning material from the matrix in the paleontological laboratory. The principal work of this kind accomplished during the year was the preparation of skulls and parts of skeletons of *Moropus* and *Hyphippus*.

The crowded condition in the herbarium has necessitated certain alterations whereby more space could be obtained to accommodate the collections. The congestion has been temporarily alleviated by transferring the mounting room from the second to the first gallery of the north Court, thus freeing the west room of the second gallery for herbarium extension. By this change sufficient space has been gained to accommodate the herbarium for about two years: moreover, ■ additional room for temporary storage purposes was secured in connection with the newly appointed mounting room. A combination steel table and bookcase has been installed in the library of the Department, especially designed for the proper shelving and preservation of the heavier and some of the rarer botanical folios, of which several have been acquired during the past year. The case is approximately 9 feet ■ $3\frac{1}{2}$ feet x $2\frac{1}{2}$ feet, with a capacity sufficient to accommodate about 100 ordinary folios; in general style and finish it conforms with the steel herbarium cases already in use in this Department. Notwithstanding the absence of the Curator on two extended European trips during the year, very satisfactory progress has been made in the rehabilitation of the Section of Plant Economics. The entire south

galleries have been recased; and the cases installed and labeled, the old installation removed from the west galleries, properly reclassified and distributed into systematic storage preparatory to installation; and the entire west galleries recased with the exception of a small space reserved for the work of present installation. The large collections of heterogeneous timber specimens of Australia, British Guiana, Venezuela, Paraguay, and Brazil (Amazonas and Parana) have been resawed, re-dressed, and rendered homogeneous, and the following new installations accomplished: One case showing log, plank, and tree growth sections of the Russian Oak and Ash; a similar case representing six other species of the hard woods of the Empire, and two others detailing the coniferous woods; the specimens comprising this installation are ample and highly representative and were received from the Imperial Forestry Bureau. One case comprising the principal and most interesting timbers of Formosa, showing the bark, grain of the wood, and its susceptibility of finish. Seven cases have been installed with Japanese dendrologic material, making a total of nine cases devoted to the timbers of that country. The new installation comprises in three cases an excellent and unique series of the major construction timbers in fine and representative examples, one of the cabinet timbers in ample size to show their markings and susceptibility to polish, another of other species showing the rarer forms and specialized marking; another illustrating the special timbers utilized for "toko posts"; a case illustrating the growth by decades of seven species of conifers, and one case detailing the use of the bamboo construction material. Three cases exemplifying the timbers of British India, in one of which is placed a round table top of padouk (*Pterocarpus indicus*) over 6 feet in diameter, cut from a single board, and specimens of blackwood (*Dalbergia nigra*) illustrating its adaptability for large carvings and sculptures; and in two others a long series of the principal woods of the country in ample examples. Three cases illustrating, by large specimens, the principally utilized construction timbers of Australia. These are doubtless the finest examples of these timbers ever brought to this country and adequately represent the size which the trees yielding them grow as well as the grain and the other characters of each species. Three cases devoted to the more valuable and most frequently exported timbers of Brazil; one of these illustrates the species in plank form and two, the bark and wood characters in apposition. All the specimens in the above cases have been fully and descriptively labeled and present an appear-

ance rendering them highly attractive and educational to the public. In the general systematic series, representing plant economics, the following additional cases have been installed: one case illustrating the Sedges including the Egyptian papyrus and its utilization in the ancient manufacture of scrolls for writing the "books of the dead." A case has been added to the Palms in which is represented a long series illustrative of the double or Seychelles coconut, the largest tree fruit known. The maize series has received the addition of a ■■■ of further utilizations to the four cases already in the suite. In order to avoid constant shifting of the cases to keep up the consecutiveness of the systematic installation while occupying the illy adapted quarters of the Department in the present rambling building, ■ second series has been begun in the west galleries and transept. For this series these galleries are now fully occupied by new cases placed in position during the late Summer. The installation of these cases has proceeded thus far ■ follows: One case devoted to utilized fossil plants exemplified by fossil woods, peat, and gums, with articles and fabrics made from each. One ■■■ illustrating various utilizations of plants belonging to the Potato Family; principally, in this case, tobacco from various parts of the world; and another case comprising the plant economics of the Trumpet Creeper family, which yields among other products the highly valuable calabash (*Crescentia Cujete*). The installation of this entire section is anticipated to be finished by June next. In addition to the installation work many of the previously installed cases have been fully and descriptively labeled and "copy" has been written for all cases so far installed.

During the year the exhibition collection of mounted mammals has been rearranged and seven new cases added. Eleven new specimens of mammals have been mounted by Mr. Freisser which have been installed in Hall 20. Among these were a fine male gorilla, a chimpanzee, and a jaguar. Several other specimens of the larger mammalia are being mounted, including wolves and bears, and these will be added to the exhibition collection at an early date. Two new groups of mammals, ■■■ of woodchucks and one of muskrats, have been completed by Mr. Pray. For the exhibition collection of birds 40 specimens have been mounted and installed, and a case illustrating albinism in animals, which includes a number of birds, has been placed on exhibition. The collection of Illinois birds contained in Hall 27 is practically completed, several nests having been added during the past year as well as descriptive labels in addition to those

already placed. Four larger and two smaller fish groups have been mounted during the year. The larger groups are in 6 feet long by inches high and about inches wide. The groups are mounted to give the effect, as far possible, of live fishes under natural conditions. An important work in the Division of Entomology was the installation of an exhibition series of butterflies and moths of the United States and Canada. So far there has been arranged for the purpose a fair representation of butterflies and two families of moths, the Sphingidae and Saturniidae. Most of the specimens thus displayed were respread before placing them in the cases, which work was done in a satisfactory manner. During the latter part of the year Mr. Gerhard spent six weeks in Reading, Pennsylvania, preparing for shipment the Strecker collection containing some 50,000 specimens, mention of which is made elsewhere.

PAINTING.—The following work has been accomplished in this section:

	Labels.	Other Impressions.
Department of Anthropology	1,665	5,300
Department of Botany	1,866	18,150
Department of Geology	3,839	1,505
Department of Zoology	1,407	12,602
Director's Office		74,229
Higinbotham Hall	1,258	
The Library		11,746

PHOTOGRAPHY AND ILLUSTRATION.—The following table gives the result of the operations performed:

	Negatives.	Prints.	Lantern Slides.	Enlarge- ments.
Director's Office	64	84		12
Department of Anthropology	2,178	3,176		14
Department of Botany	51	878		18
Department of Geology	22	245	60	1
Department of Zoology	352	1,463	491	
General		17	59	
Totals	2,667	5,863	710	46
Total number of inventory entries to December 31, 1908				69,418
Entries from December 31, 1907, to December 31, 1908				9,895

Negatives developed for

Department of Botany 391

Negatives developed for

Department of Geology 49

Negatives developed for

Department of Zoology 169

Total 609

ATTENDANCE.—The attendance for the year shows a slight increase over the previous year. The following is a list of the school classes (thirty pupils or more) that visited the Museum during the year just closed:

Schools and Location.	Teachers.	Pupils.
University High — Fifty-ninth Street and Monroe Avenue	1	30
Carter — Sixteenth Street and Wabash Avenue	1	33
Hyde Park — Fifty-seventh Street and Kimbark Avenue	2	45
Thornton Township — Harvey, Illinois	1	35
University Elementary — Fifty-ninth Street and Monroe Avenue	2	33
University of Chicago — Chicago, Illinois.		34
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	2	51
James Shields — South Rockwell, corner West Forty-third Street	1	45
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	2	35
University of Chicago — Chicago, Illinois.	1	48
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	54
Hoyne High — Illinois Street, corner Cass Street	1	45
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	50
Forest Park — Forest Park, Illinois	1	44
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	40
Joliet High — Joliet, Illinois	2	105
Jackson Park — Fifty-sixth Street and Stony Island Avenue	2	35
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	55
Frances E. Willard — Forty-ninth Street and St. Lawrence Avenue	1	39
University Elementary — Fifty-ninth Street and Monroe Avenue	1	30
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	48
Chicago Kindergarten College — 1200 Michigan Avenue		35
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	30
Parkman — Fifty-first Street and Princeton Avenue	1	38
Goldsmith — 210 Maxwell Street	1	35
Englewood High — West Sixty-second Street and Stewart Avenue	1	175
Frances E. Willard — Forty-ninth Street and St. Lawrence Avenue	1	40
Harrison Practice — Twenty-third Place and Wentworth Avenue	3	36
Thomas Brennan — Lime Street and Archer Avenue	2	60
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	30
Morgan Park — Morgan Park, Illinois.	2	71
John H. Hamline — West Forty-eighth and Bishop Streets	2	38

Schools and Location.	Teachers.	Pupils.
Saunders — Blue Island, Illinois	3	34
Prescott — Wrightwood Avenue, corner North Ashland Avenue	2	58
Parkside — Seventieth Street and East End Avenue	1	36
John H. Hamline — West Forty-eighth and Bishop Streets	2	39
John H. Hamline — West Forty-eighth and Bishop Streets	2	38
Blue Island — Blue Island, Illinois	1	30
Kenwood — Lake Avenue and Fiftieth Street	2	35
Wendell Phillips High — Thirty-ninth Street and Prairie Avenue	1	40
J. N. Thorpe — Superior Avenue and Eighty-ninth Street	1	105
Blue Island — Blue Island, Illinois	8	126
Burr — Ashland Avenue and Wabansia Avenue	2	30
John H. Hamline — West Forty-eight and Bishop Streets	1	36
Blue Island — Blue Island, Illinois	1	40
Whittier — Blue Island, Illinois	2	83
Seymour — Blue Island, Illinois	2	75
Esmond Street — Morgan Park, Illinois	8	80
Washington — Racine, Wisconsin	4	36
Frances E. Willard — Forty-ninth Street and St. Lawrence Avenue	2	38
Mark Sheridan — Twenty-seventh Street and Wallace Street	1	62
John H. Hamline — West Forty-eighth and Bishop Streets	2	68
Fiske — Sixty-second Street and Ingleside Avenue	1	43
McCormick — Twenty-seventh Street and Sawyer Avenue	1	31
W. K. Sullivan — Eighty-third Street and Houston Avenue	6	198
Shields — Forty-third Street and Rockwell Avenue	1	33
Raymond — Thirty-sixth Place and Wabash Avenue	2	33
University of Chicago — Chicago, Illinois.	1	35
Garfield — Fourteenth Place and Johnson Street	2	95
Washburne — West Fourteenth and Union Streets	1	35
Talcott — W. Ohio Street, corner Lincoln Street	4	98
Oglesby — Seventy-ninth Street and Emerald Avenue	2	56
William Penn — Sixteenth Street and Avers Avenue	1	48
Thomas — Belden Avenue and High Street	2	36
Earle — Sixty-first Street and Hermitage Avenue	1	55
Altgeld — Seventy-first and Loomis Streets	2	30
Van Vliessen — One hundred and Eighth Place and Wentworth Avenue	1	53
John Foster — Union and O'Brien Streets		35
Immaculate Conception — Thirty-first Street and Bonfield Avenue	2	32
Sacred Heart — Nineteenth and Johnson Streets	5	39
Goldsmith — 220 Maxwell Street		39
University of Chicago — Chicago, Illinois.		30
University of Chicago — Chicago, Illinois.		60
University of Chicago — Chicago, Illinois.	1	48

Schools and Location.	Teachers.	Pupils.
John Spry — Twenty-fourth Street and Marshall Boulevard	16	383
University of Chicago — Chicago, Illinois.		30
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	60
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	52
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	56
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	60
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	98
John H. Hamline — West Forty-eighth and Bishop Streets	2	30
Forestville — Forty-fifth Street and Forestville Avenue	1	43
Gladstone — South Robey Street and Washburne Avenue	1	41
Lake High — Forty-seventh Street and Union Avenue	1	35
Gladstone — South Robey Street and Washburne Avenue	3	118
St. Xavier's Academy — Forty-ninth Street and Evans Avenue	2	35
Aitgeld — Seventy-first and Loomis Streets	1	36
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	58
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	42
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	70
Henry Clay — One hundred and Thirty-third Street and Superior Avenue	1	44
Parkside — Seventieth Street and East End Avenue	1	34
John C. Conley — Leavitt Street and Belle Plaine Avenue	1	39
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	2	36
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	40
Morgan Park — Morgan Park, Illinois.	1	38
St. Vincent's High — Webster Avenue, corner Sheffield Avenue	2	35
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	45
Minnesota University — Minneapolis, Minnesota	1	42
Hyde Park High — Fifty-Seventh Street and Kimbark Avenue	1	96
University of Chicago — Chicago, Illinois.	1	30
University of Chicago — Chicago, Illinois.	1	30
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	2	54
Thornton Township High — Harvey, Illinois	1	45

Herewith are also submitted financial statements, list of accessions, names of members, etc.

FREDERICK J. V. SKIFF,
Director.

FINANCIAL STATEMENT.

GENERAL ACCOUNT.

RECEIPTS AND DISBURSEMENTS

From January 1, 1908, to December 31, 1908.

RECEIPTS.

Cash in Treasurer's hands, December 31, 1907	\$14,072.28
Petty Cash on hand, December 31, 1907	739.95
Dues of Members	1,770.00
Admissions and Check Rooms	5,354.70
Sale of Guides	406.25
South Park Commissioners	15,000.00
Huntington W. Jackson Library Fund	40.00
Field Endowment Income	150,046.93
Interest on Investments	45,585.19
Interest on Bank Balances	771.80
Sundry Receipts	1,216.83
Mrs. Timothy B. Blackstone, Thibetan Fund	30,000.00
R. F. Cummings Philippine Fund	5,500.00
	<hr/>
	\$270,503.93

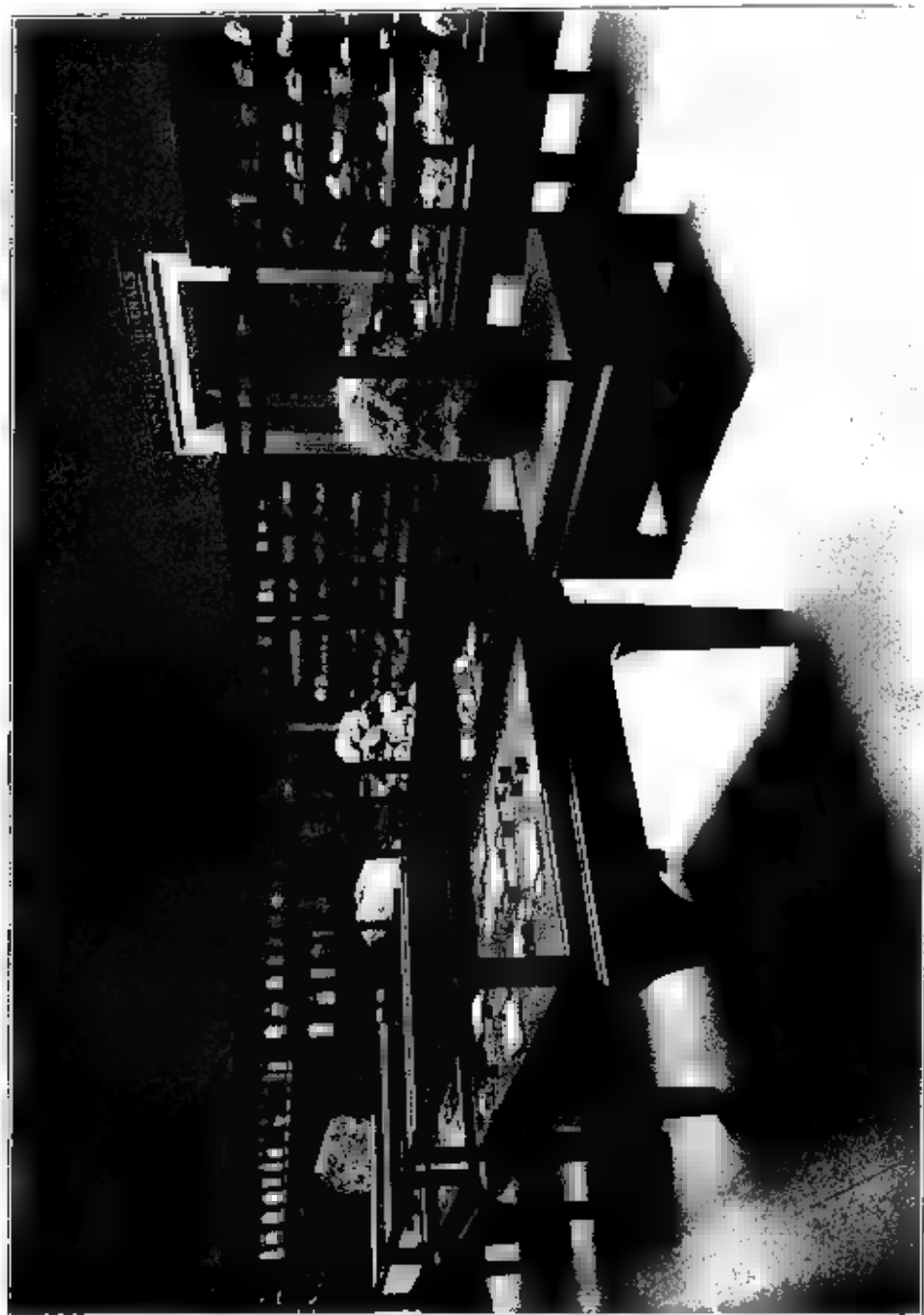
DISBURSEMENTS.

Salaries		\$76,993.38
Guard Service		12,536.59
Janitor Service		8,920.83
Fire Protection		3,870.60
Heat and Light —		
Wages	\$3,765.66	
Fuel	5,497.14	
Gas	334.73	
Sundries	<u>1,049.69</u>	10,647.22
Repairs and Alterations —		
Wages of Carpenters, Painters, Roof-		
ers	12,488.11	
Material used — paints, oils, lumber,		
glass, etc.	<u>1,521.27</u>	14,009.38
Furniture and Fixtures —		
Cases and Bases	29,743.98	
Office Furniture	<u>502.34</u>	30,246.32
The Library —		
Books	2,923.44	
Binding	998.50	
Sundries	<u>105.85</u>	4,027.79
Sections of Printing and Photography		1,943.60
Collections, etc., Purchased		18,050.19
Departmental Expenses		4,679.03
Guide, Eighth Edition		128.62
General Expense Account —		
Freight, Expressage and Teaming	3,959.52	
Stationery, Postage and Telephone, etc. .	867.85	
Lecture Course Expense	624.32	
International Audit Co.	250.00	
Publications	2,162.65	
Expeditions	8,395.95	
Sundries	<u>821.42</u>	17,081.71
Mrs. Timothy B. Blackstone Fund		14,900.00
R. F. Cummings, Philippine Fund		<u>4,380.40</u>
		\$222,415.00
Petty Cash	739.95	
In Treasurer's hands, December 31, 1908 .	<u>47,348.32</u>	48,088.27
		\$270,503.27

ATTENDANCE AND RECEIPTS FROM JANUARY 1, 1908, TO
DECEMBER 31, 1908.

ATTENDANCE.

Paid Attendance —		
Adults	18,503	
Children	1,357	19,862
Free Admission on Pay Days		
School Children	5,581	
Students	4,989	
Teachers	428	
Members: Corporate	29	
Annual	61	
Life	9	
Officers' Families	64	
Special	381	
Press	5	11,547
Admission on Free Days —		
Saturdays	44,614	
Sundays	139,579	184,193
Total Attendance		215,602
Highest Attendance on any day (August 23, 1908)		7,376
Highest Paid Attendance on any one day (September 7, 1908)		436
Average Daily Admissions (366 days)		589
Average Paid Admissions (262 days)		75
RECEIPTS.		
Guides Sold — 1,625 at 25 cents each		\$406.25
Articles Checked — 11,861 at 5 cents each		593.05
Admissions		4,761.65
		<u>\$5,760.95</u>



HALL 78. NON-METALLIC MINERALS.

ACCESSIONS.

DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT ————— DESIGNATED.)

AYER, EDWARD E., Chicago.

1 red pigment — Egypt.

BARBER, C. M., La Porte, Indiana.

1 fish trap, of split cane arranged and fastened to form a narrow cane with handle of cane — Lake Atitlan, Guatemala.

BROOKLYN INSTITUTE MUSEUM, Brooklyn, New York.

23 Anthropological photographs — Southwest (exchange.)

DEISHER, H. K., Kutztown, Pa.

9 large photographs of groups of baskets of donor's collection.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by E. E. Ayer:

Archæological objects — Egypt and Italy.

Ethnological objects — from Nubia.

Collected by F. C. Cole:

Ethnological objects — Luzon and Palawan Islands.

Collected by Geo. A. Dorsey:

Ethnological specimens — Java.

Ethnological specimens — Bismarck Arch.

Ethnological specimens of the Todas — Nilgiri Hills, India.

Crania, human — New Ireland.

Crania, human — German New Guinea.

Objects of Hindu Religion — Madras, India.

Singhalese Ethnology — Ceylon.

Ethnological specimens — Solomon Islands.

Boomerangs, arrow heads, etc. — Australia.

Ethnological specimens — German New Guinea.

Ethnological specimens — New Ireland and adjacent Islands.

Collected by B. Laufer:

Ethnological objects — Sikkim.

Purchases:

Winnebago blood doctor's outfit.

1 wooden ladle, 1 quirt (bone handle), 1 game (feet bones of deer), 1 quiver (buffalo hide), 1 bow, 1 knife (deer horn handle) — Black River Falls, Wisconsin.

1 skull of an African of Lumba tribe with tribal marks, 2 central incisors of lower jaw removed and sockets filled, also notch between two upper central incisors — Africa.

Sacred medicine bundle.

Buffalo robe.

Large gourd rattle of the Pawnee Indians.

Buckskin shirt, trimmed with locks of hair, buckskin fringe, broad bands of old colored bead and large ornamentations in colored porcupine quill work on front and back.

Ethnological objects from Nebraskan Winnebago Indians — Winnebago, Nebraska.

1 drum stick, 1 deer necklace, and bear claw.

2 medicine rattles.

1 ladle.

3 balls of native twine.

2 native made bags.

Ethnological material — Winnebago.

1 squaw pipe — Wisconsin.

Ethnological material — German New Guinea.

HALL, LIEUT. C. S., United States Army.

Saddle bag of tanned hide with long fringe of same — Sierra Madre Mts., Sonora, Mexico.

HIGINBOTHAM, H. N., Chicago.

1 chipped flint — point.

1 chipped flint blade — Gary, Indiana.

HOWARD, MRS. C. E.

1 piece of timber rafter from ruins — Casa Grande, Gila Valley, Arizona.

HUSSAR, MRS. LILIAN, Chicago.

Ethnological objects — Camarine Prova, Luzon, Philippine Islands.

LARKIN, T. J., Chicago.

Sinew backed bow, eight arrows and buffalo hide quiver — White Earth, North Dakota.

MUSEUM FÜR VÖLKERKUNDE, Berlin, Germany.

Ethnological objects — Brazil (exchange).

MCCORMICK, CYRUS H., Chicago.

2 Chilcotin baskets.

OPPENHEIM, M. A., Chicago.

1 rain coat of intestine, sewed with sinew — Katzebue Sound, Alaska.

PRICE, JOHN E., Seattle, Washington.

1 Apache Indian medicine man's cap — Mexican border.

SNOW, EDGAR M., Chicago.

Fire sticks, obtained by donor from Samoa.

SPENCER, REV. IRVING, Chicago.

2 wooden figures (2 on one base, 2 singly), 1 wooden dish, animal shape with lid back — Bana, N. V. P. I.

QUIBELL, J. M., Bedrashien, Egypt.

2 photographs and one plan of the tomb of Niterieser.

DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

- BARTLETT, H. H., Cambridge, Massachusetts.
 ■ herbarium specimens — Massachusetts and Georgia.
- BEBB, ROBERT, Chicago.
 2 herbarium specimens — Europe.
- BOLIVIAN COMMISSION W. C. E., 1893, Chicago.
 10 economic specimens — Bolivia.
 1 herbarium specimen — Bolivia.
- BOWERS, W. V., Chicago.
 2 herbarium specimens — Illinois.
- BRANDEGEE, T. S., Berkeley, California.
 ■ herbarium specimens — Mexico.
- BRANNON, M. A., University, North Dakota.
 Herbarium specimens — Colorado.
- CALDWELL, OTIS W., Chicago.
 1 *Microcycas calceoma* parts of staminate and ovulate cones —
 Cuba.
- CALKINS, W. W., Berwyn, Illinois.
 1 herbarium specimen — North Dakota.
 1 herbarium specimen — Illinois.
 78 herbarium specimens — Illinois.
 35 herbarium specimens — Illinois.
 1 herbarium specimen — Illinois.
- CHASE, MRS. AGNES, Washington, D. C.
 ■ plant descriptions.
- CONZATTI CASSIANO, Oaxaca de Juarez, Mexico.
 162 herbarium specimens — Mexico.
 94 herbarium specimens — Mexico.
 97 herbarium specimens — Mexico.
- COULTER, DR. J. M., Chicago.
 3 drawings.
 ■ fibers.
- COWLES, DR. HENRY C., Chicago.
 1 herbarium specimen — Illinois.
- CUSICK, WM. C., Union, Oregon.
 16 herbarium specimens — Oregon.
- DETMERS, MISS FREDA, Columbus, Ohio.
 ■ herbarium specimens.
- EDUCATIONAL MUSEUM, St. Louis, Mo.
 1 tappa cloth — Pacific Islands.
- FAWCETT, GEO. L., Miami, Florida.
 1 flowers of *Vanilla Eggersii*.
- FERRY, J. F., Chicago.
 1 herbarium specimen — Wisconsin.
- FIELD MUSEUM OF NATURAL HISTORY.
 Collated by J. M. Greenman;
 1 plant descriptions.

- 1 plant descriptions.
- 2 photographs of plants.
- 1 description of *Citharexylum lucidum*.
- 5 plant descriptions.

Collated by C. F. Millspaugh:

- 11 drawings and plates.
- 224 drawings tracings, and descriptions.
- 4 herbarium specimens.

Collated by Section of Photography and Illustration:

- 1 photograph of *Abronia Carletoni*.

Collected by L. J. K. Brace.

- 1 herbarium specimen — Bahamas.

Collected by R. A. Dixon:

- 324 herbarium specimens — Texas.

Collected by O. E. Lausung, Jr.:

- 91 herbarium specimens — Lake Chicago Basin.

Collected by C. F. Millspaugh:

- 1 *Juglans regia* (nuts) Paris, France.

Collected by H. H. Smith:

- 180 slab specimens — Missouri.
- 78 wheel specimens — Missouri.
- 170 board specimens — Missouri.
- 12 herbarium specimens — Missouri.
- 48 winter twigs — Missouri.
- 24 fruit specimens — Missouri.
- 11 fungi — Missouri.
- economic specimens — Missouri.
- 448 herbarium specimens — Missouri.
- 168 branch specimens — Missouri.
- 20 hand specimens — Missouri.
- 352 herbarium specimens — West Virginia.
- 17 dry fruits — West Virginia.
- 38 hand specimens — West Virginia.
- slab specimens — West Virginia.
- 81 board specimens — West Virginia.
- 29 wheel specimens — West Virginia.
- 28 economic specimens — West Virginia.
- 40 winter twigs — West Virginia.

Collected by P. Wilson and L. J. K. Brace:

- 756 herbarium specimens — Bahamas.

Purchases:

- 430 herbarium specimens — Guatemala.
- 4 economic specimens.
- 680 herbarium specimens — Canada, Alaska, Labrador and Nova Scotia.
- 276 herbarium specimens — Nevada and California.
- 176 herbarium specimens — Paraguay.
- 296 herbarium specimens — Oregon and Washington.

- 7,077 herbarium specimens — various localities.
- 163 herbarium specimens — United States.
- 616 herbarium specimens — Guatemala.
- 939 herbarium specimens — Western United States.
- 29 herbarium specimens — United States.
- 170 herbarium specimens — Montana.
- 872 herbarium specimens — Canada.
- 244 herbarium specimens — Mexico.
- 1,005 herbarium specimens — United States and Mexico.
- 4 specimens economic material — France and Turkey.
- 142 herbarium specimens — California.
- economic specimens drugs.
- 261 herbarium specimens — Jerusalem.
- 7 economic specimens — Jerusalem.
- 2 *Vitis vinifera* grape sugar, *Foeniculum vulgare* — Fennel seed.
- FULLER, GEO. D., Chicago.
 - 16 herbarium specimens — Alberta.
- GARVENS, W., New Rochelle, N. Y.
 - 70 herbarium specimens — Florida.
 - 109 herbarium specimens — Maine and New York.
- GATES, FRANK C., Chicago.
 - herbarium specimen — Illinois.
- GEHE ■ COMPANY, A. G., Dresden, Germany.
 - 4 ear weed surgical appliances.
- GRAY HERBARIUM, Cambridge, Mass.
 - 285 herbarium specimens — Bahamas (exchange).
- GREENMAN, J. M., Chicago.
 - 1 colored plate of *Gossypium* cotton.
 - 1 herbarium specimen — Africa.
 - photograph of *Zea Mays* L.
 - 1 herbarium specimen — Massachusetts.
- GRINNELL, JOSEPH, Pasadena, California.
 - 63 herbarium specimens — California.
- GUTHRIE, OSSIAN, Chicago.
 - 2 white oak (fossils) Chicago, Illinois.
- HILL, E. J., Chicago.
 - 65 herbarium specimens — United States.
- INSTITUTIONS OF SCIENCE AND ART, Dublin, Ireland.
 - 29 samples of dyed yarns (exchange).
- IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, Ames, Iowa.
 - 118 herbarium specimens — China.
- KING, E. W., Coyame, Chihuahua, Mexico.
 - 1 herbarium specimen — Mexico.
- KONIGL BOTANISCHES MUSEUM, Berlin, Germany.
 - herbarium specimen — Guatemala.
- KNUDSON, P. E., Ephraim, Wis.
 - 1 fruits of *Celastrus scandens* L. — Wisconsin.

LANSING, O. B., JR., Chicago.

1 economic specimen *Lycoperdon gemmatum* — Illinois.

LEWIS, A. B., Chicago.

1 specimen cork — British East Africa.

LUNELL, DR. J., Leeds, North Dakota.

11 herbarium specimens — North Dakota.

MILLSPAUGH, C. F., Chicago.

2 economic specimens — New Jersey.

1 *Chrysobalanus Icaco*, varach candle — Africa.

1 sophisticated maple sugar.

1 barley sugar.

14 ——— specimens — Austria, Germany, Italy, and Sicily.

3 specimens — olives, opium, almonds — Palestine and Turkey.

1 *Catalpa speciosa* fruit — Lake Chicago Basin.

1 *Catalpa bignonioides* fruit — Lake Chicago Basin.

MOSELEY, E. L., Sandusky, Ohio.

743 herbarium specimens — Ohio (exchange).

MYERS, G. W., Chicago.

2 herbarium specimens — Colorado.

NEW MEXICO AGRICULTURAL EXPERIMENT STATION, New Mexico.

204 herbarium specimens — New Mexico.

NEW YORK BOTANICAL GARDEN, Bronx Park, New York City.

26 herbarium specimens — New Jersey and Jamaica (exchange).

■ herbarium specimens — various localities (exchange).

6 herbarium specimens — New Providence, Bahamas (exchange).

29 herbarium specimens — Barbados (exchange).

1 herbarium specimen — Jamaica.

177 herbarium specimens — Bahamas and Jamaica (exchange).

PRINGLE, C. G., Burlington, Vermont.

1 herbarium specimen — Mexico.

REECHER, S. E., Chicago.

24 herbarium specimens — Illinois.

7 herbarium specimens — Illinois.

8 herbarium specimens — Illinois.

ROWLEE, W. W., Ithaca, N. Y.

1 *Dipsacus sylvestris* fruits — New York.

SEPPER, DR. PEHR OLSSON, Mexico City, Mexico.

46 rubber samples — Mexico.

SKIFF, F. J. V., Chicago.

1 *Cyperus Papyrus* — Spain.

SLOCOM, A. W., Chicago.

1 specimen fungus — Michigan.

SMITH, W. O., Winchester, Indiana.

1 diatomaceous earth — New York.

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

251 herbarium specimens — Mexico (exchange).

1 herbarium specimen — Ontario, Canada.

VAN HOUTEN AND ZOON, C. J., Chicago.

1 *Theobroma cacao*.

WILLARD, O. T., Chicago.

1 herbarium specimen — Illinois.

WOOTON, M. O., Mesilla Park, New Mexico.

13 herbarium specimens — New Mexico.

DEPARTMENT OF GEOLOGY.

(ACCESSIONS ARE ■ GIFT UNLESS OTHERWISE DESIGNATED.)

ADAMS, C. C., University of Chicago, Chicago.

1 specimen thomsonite in matrix — Isle Royale, Lake Superior.

ALABAMA WHITE MARBLE CO., Gantt's Quarry, Alabama.

6 polished slabs marble — Gantt's Quarry, Alabama.

ALBRIGHT, W. F., Chicago.

Bones and tooth of mammoth — Dallas, Texas.

ATLAS SCHOOL SUPPLY CO., Chicago.

Relief map of Palestine.

BRIDGE, B., Chicago.

1 specimen moss agate — Guernsey, Wyoming.

CARNEGIE MUSEUM, Pittsburgh, Pennsylvania.

Casts of limb bones and feet of *Apatosaurus*.

COLORADO SCHOOL OF MINES, Golden, Colorado.

22 specimens rocks and minerals — Colorado (exchange).

CRAWFORD, W. L., JR., Dallas, Texas.

1 lower jaw of *Smilodon*, 2 leg bones of mammoth — Dallas, Texas.

DESERET MUSEUM, Salt Lake City, Utah.

33 large crystals of selenite — South Wash, Wayne Co., Utah (exchange).

DAVIES, D. C., Chicago.

1 specimens marl — Radcliffe on Trent, Notts, England.

ESTATE OF H. A. WARD, Chicago.

Section of Lampa meteorite — Chile.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by O. C. Farrington:

3 specimens clay and cement materials — Dallas, Texas.

22 specimens peridotite, 3 specimens asphalt, 7 specimens gypsum,

1 specimen *Ostrea* — Southwestern Arkansas.

Collected by J. F. Ferry:

6 specimens rock of volcano of Turrialba, Costa Rica.

1 specimen rock phosphate — Aruba, Dutch West Indies.

Collected by H. W. Nichols:

1 specimen bog clay, 1 specimen soil — Hammond, Indiana.

Collected by E. S. Riggs:

Vertebrate fossils from Loup Fork Miocene, Raw Hide Buttes,

Wyoming, as follows:

7 specimens extinct camel representing two genera.

4 specimens oreodonts representing three genera.

- 5 specimens extinct horse.
- specimens extinct dog.
- specimens Moropus.
- 10 specimens extinct rhinoceros.

Collected by A. W. Slocum:

- 4,950 specimens Cretaceous and Tertiary invertebrates.
- 5 specimens marl, ■ specimens concretions, 3 specimens minerals — Mississippi.
- 11 specimens fossil corals — Little Traverse Bay, Michigan.
- 117 specimens Devonian invertebrates, 46 specimens pebbles and concretions — Emmet Co., Michigan.

Purchases:

- 1 Leighton meteorite.
- 2 sections Ainsworth and Williamstown meteorites.
- 68 species fossil corals — Falls of the Ohio.
- 200 specimens invertebrate fossils; 25 specimens vertebrate fossils — Patagonia.
- specimen vivianite — Leadville, Colorado.
- 3 specimens chrysoberyl — Peru, Maine.
- 6 specimens minerals — various localities.
- 4 relief maps.
- specimens gold ore — Rawhide, Nevada.
- 3 mineral specimens.
- 1 specimen tetrahedrite — Utah.
- Skull, tusk, and miscellaneous bones of mammoth — Alaska.
- 4 mineral specimens.

GAMBA, F. PEREIRA, Pasto, U. S. of Colombia.

- 1 specimen gold ore — near River Guachicono, Colombia, South America.

IOLA CO-OPERATIVE ZINC & LEAD CO., Zinc, Arkansas.

- 1 specimen blende, ■ specimen blende concentrates, 1 specimen float galena — Iola Mine, Zinc, Arkansas.

JOHNSTON, L., Chicago.

- specimens rock-crystal — Jonesboro, Arkansas.

KURTZ,*S. A., Bellevue, Ohio.

- 1 calcite crystal — Bellevue, Ohio.

LARKIN, THOMAS J., Chicago.

- 1 specimen opal in breccia — Fort Bayard, New Mexico.

MILLER, M. J., Chicago.

- 5 specimens clauabur pebbles — Washington Creek, Alaska.

MOSELEY E. L., Sandusky, Ohio.

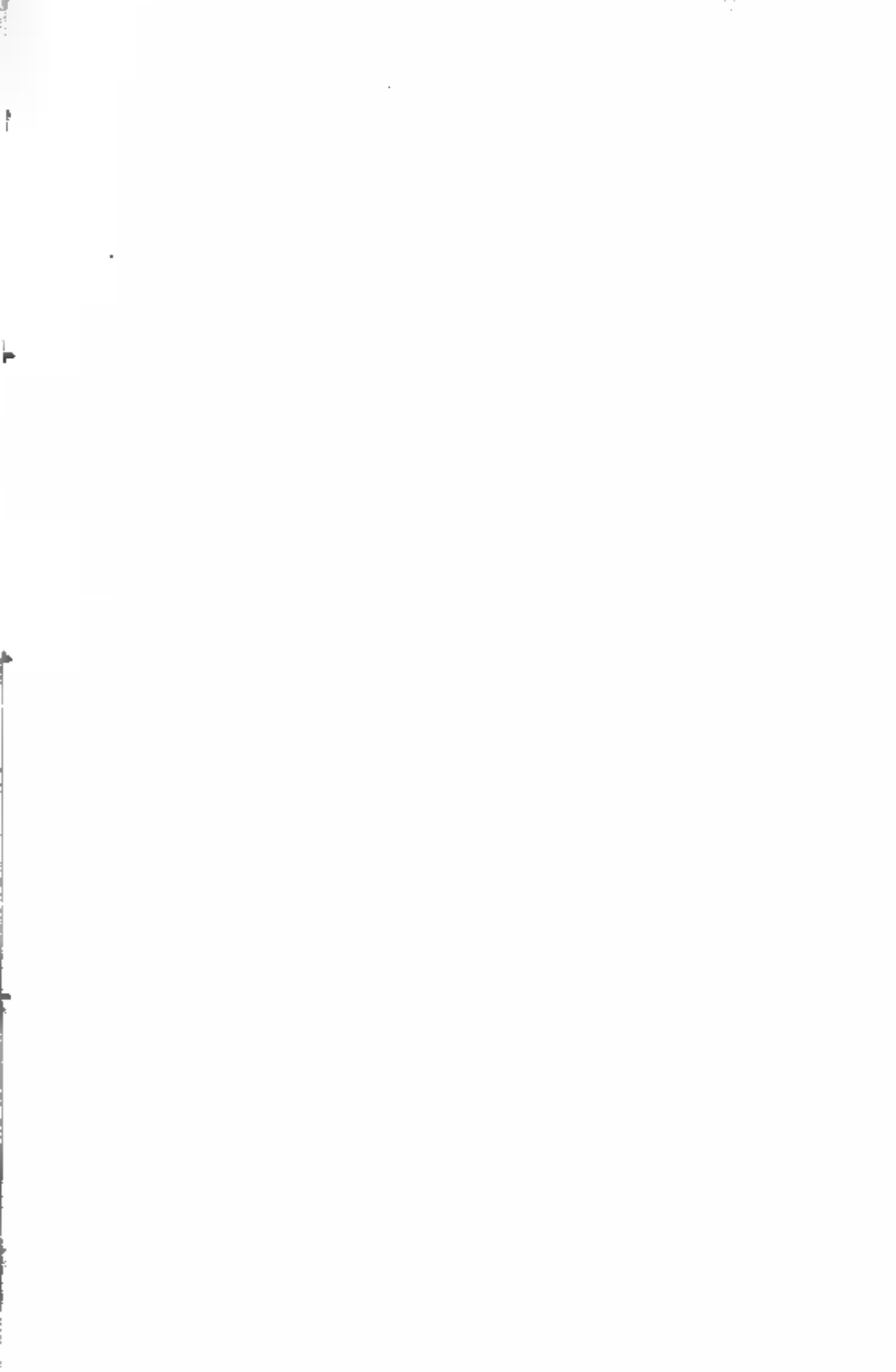
- 94 specimens fossils, 13 specimens minerals, 11 geological specimens — Sandusky, Ohio (exchange).

NEWBERRY, W. W., Chicago.

- 18 specimens ores, 16 specimens pyrite, 13 specimens fossils, 2 specimens siliceous oolite — Bromide, Oklahoma.

PHILADELPHIA MINERALOGICAL CLUB, Philadelphia, Pennsylvania

- 54 specimens minerals of Pennsylvania (exchange).





GROUP OF WOODCHUCKS. *Marmota monax*. (LINN.)

RING, H. A., Nome, Alaska.

■ specimens placer gold ores — Gold Run Creek — Seward Peninsula, Alaska

VERMONT MARBLE CO., Proctor, Vermont.

15 polished slabs of marble — Vermont.

DEPARTMENT OF ZOÖLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AKSELEY, MRS. C. E., Chicago.

2 beetles — Kilo, Congo Region, Africa.

BARBER, C. M., Chicago.

1 waterbug — Chicago.

6 frogs — Chicago.

BARKER, F. H., Victoria, Australia.

41 shells — Victoria, Australia (exchange).

BRAZIL, DR. VITAL, Sao Paulo, Brazil.

11 snakes — Sao Paulo, Brazil (exchange).

CARPENTER, C. H., Chicago.

1 dragonfly — Illinois.

1 spider — Michigan.

CARRIAKER, M. A., JR.

12 fishes — Costa Rica (exchange).

CHAVES DIOCLECIANO, Managua, Nicaragua.

7 beetles, 1 moth, 55 butterflies — Nicaragua (exchange).

CHILDREN'S MUSEUM, Brooklyn, New York.

2 fishes — Guatemala.

COBB, B. B., Chicago.

1 turtle — Chicago.

DEUBLER, L., Chicago.

1 beetle — Chicago.

DEWEY, C. L., Chicago.

1 turtle — Dowagiac, Mich.

FARRINGTON, O. C., Chicago.

1 American woodcock — Chicago.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by C. E. Akseley:

2 eggs of the Secretary bird — British East Africa.

Collected by C. M. Barber:

6 snakes, 7 frogs, 1 salamander — Willow Springs, Illinois.

150 fishes — Willow Springs and Lockport, Illinois.

Collected by C. B. Cory:

Nest and eggs of Prothonotary warbler — English Lake, Indiana.

Collected by N. Dearborn:

50 fishes — Venezuela.

204 specimens dragonflies, bird lice, bugs, grasshoppers, beetles, butterflies, moths and flies — Venezuela.

27 lizards — Curacao, Dutch West Indies.

1,115 bird skins — Venezuela and adjacent Islands.

Collected by C. L. Dewey:

9 black terns, 1 least bittern, 3 yellowhead blackbirds.

■ redwinged blackbirds, 1 bobolink, 2 king rails, 2 sora rails, nestlings — Fox Lake, Illinois.

Collected by Geo. A. Dorsey and Mrs. Clemens:

531 specimens shells — various localities.

Collected by J. F. Ferry:

1,000 bird skins — Costa Rica and Panama.

1,100 bird skins — Venezuela and adjacent Islands.

1 heron, 2 blackbirds, ■ woodpeckers, 11 flycatchers, 3 vireos, ■ thrushes, 7 wrens, nuthatches and chickadees, ■ sparrows, 2 tanagers, 28 warblers, 2 cuckoos — Woodruff, Wisconsin.

100 specimen shells.

2 lizards, 1 toad — Costa Rica.

1 snake, ■ lizards — Aruba, Dutch West Indies.

2 lizards, 1 snake — Colon, Panama.

1 toad, 3 lizards — Costa Rica.

1 toad, 4 lizards, 1 snake — Costa Rica.

■ lizards — Bonaire, Dutch West Indies.

1 wasp, 2 beetles, 2 bugs, 3 bird lice, 1 grasshopper, 1 centipede — various localities.

3 thrushes, 2 vireos, 2 warblers, 1 sparrow, 1 swallow, 1 flycatcher, 1 rail, 1 snipe — Lake County, Illinois.

Collected by W. J. Gerhard:

1 toad.

397 specimens dragonflies, grasshoppers, bugs, beetles, butterflies, moths, flies, bees, wasps and parasites — Illinois and Indiana.

Collected by ■ Heller:

176 mammal skins, ■ mammal skeletons, 24 mammals in alcohol — Louisiana.

2 snakes, 12 lizards, 1 salamander — Louisiana.

Collected by S. F. Hildebrand:

1 salamander — Wolf Lake, Indiana.

Collected by ■ E. Meek:

2 fishes — Millers, Indiana.

1 snake — Millers, Indiana.

1 snake — Pine, Indiana.

3 fishes — Jackson Park, Chicago.

■ fishes — Pine, Indiana.

11 fishes — Baudette, Minn.

6 fishes — Liverpool, Indiana.

10 fishes — Fox Lake, Illinois.

17 fishes — Jackson Park, Chicago.

20 fishes — Millers, Indiana.

63 fishes — Pine, Indiana.

Collected by S. E. Meek and W. Heim:

- 5 turtles, 1 salamander — Meredosia, Illinois.
- 39 fishes — Meredosia, Illinois.
- 31 fishes — Pullman, Illinois.
- 26 fishes — Alton, Illinois.

Collected by S. E. Meek, S. F. Hildebrand, and J. Freisser:

- 140 fishes — Fox River and McHenry, Illinois.

Collected by S. E. Meek and V. Shelford:

- 105 fishes — Calumet River, Clarke, Indiana.

Collected by A. W. Slocum:

- 157 fresh water shells — Emmet Co., Michigan.
- 29 beetles, moth, bugs, bee, spider, grasshopper, etc. — Mississippi.
- 203 fresh water shells — Mississippi.

Collected by H. H. Smith:

- 2 turtles — Batesville, Missouri.
- 1 hornet's nest — West Virginia.

Collected by L. L. Pray:

- 1 blue jay's skin — Dowagiac, Mich.

Collected by A. M. Wolcott:

- 177 specimens dragonflies, grasshoppers, bugs, moths, flies, beetles, bees, etc. — Illinois and Indiana.

Purchases:

- 6 snakes, 14 lizards, 18 toads, 9 frogs — Costa Rica.
- 620 sets (2,500 specimens) bird eggs — various localities.
- 146 specimens spiders, scorpions, grasshoppers, mantids, roaches, bugs, bees and wasps, beetles, moths and butterflies — Palestine.
- 42 specimens jointed spider, digger-wasp, beetles — Arizona.
- 153 specimens insects, 18 specimens reptiles, 51 mammal skins — Arizona.
- 1 porcupine fish — Jamaica.
- 50,000 specimens butterflies and moths.
- 60 mammal skins — various localities.
- 16 young alligators — Florida.
- 27 alligator eggs — Florida.
- 5 otter skins — Queen Charlotte Islands.
- 5 mammal skins — British Guiana.
- 1 finches — Horner's Ranch, Hawaii.
- 1 albinistic robin, 1 albinistic sparrow — Geneva, Illinois.
- 2 jays — various localities.
- 1 jaeger gull, 1 vega gull — various localities.
- 213 bird eggs — Iowa.
- 1 goose, 1 duck, 3 nighthawks, 1 sparrow — various localities.
- 2 bird skins.
- 1 whooping swan — Greenland.
- 13 bird skins — Costa Rica.
- 14 bird skins.
- 2 mammal skins.
- 2 barn owls — Enid, O. T.

1 golden eagle — Custer, Wyoming.

298 bird skins — British Guiana.

Mounted by E. N. Gueret:

1 skeleton of tree frog.

3 skeletons of turtle and snakes.

2 skeletons of turtles.

3 skeletons of turtles.

1 skeleton of fish.

1 skeleton of turtle.

1 skeleton of turtle.

1 skeleton of alligator.

1 skeleton of turtle.

1 skeleton of Dowitcher bird.

1 skeleton of blanding's turtle.

1 skeleton of black bear.

2 skeletons of alligator and capybara.

1 skeleton of tapir.

1 skeleton of sea elephant.

3 skeletons of turtles.

1 skeleton of screech-owl.

1 skeleton of fish.

11 skeletons of snapping turtles.

3 skeletons of turtles.

1 skeleton of box turtle.

1 skeleton of fish.

1 skeleton of gar-pike.

3 skeletons of fishes.

1 skeleton of turtle.

1 skeleton of bird.

1 skeleton of screech-owl.

FRIESSER, J., Chicago.

1 beetle, 1 fly larva, 1 stonefly, 1 fly — various localities.

1 snake, 5 frogs — McHenry, Illinois.

3 fishes — McHenry, Illinois.

FOWLER, DR. W. N., Bluffton, Indiana.

11 eider ducks, 2 ivory gulls, 1 puffin, 1 jaeger.

GILHUPE, F. H., Chicago

2 bullfrogs — Liverpool, Indiana.

GUBRET, E. N., Chicago.

1 beetle — Chicago.

HACK, PAUL, Oropo, Venezuela.

11 beetles — Oropo, Venezuela.

HERTZ, A., Chicago.

3 roaches, 1 grasshopper — Illinois and Indiana.

HILDEBRAND, S. F., Chicago.

1 spider — Chicago.

HOWE, MURRAY, Chicago.

6 muskrats — Iowa.

- HULL AND BANGS, Waukegan, Illinois.
■ crossbills — Waukegan, Illinois.
- HUME, J. A., Chicago.
■ red bat — Chicago.
- KENKEL, L. V., Chicago.
69 beetles — Michigan.
- KWIAT, A., Chicago.
■ dragonflies — Clarke, Indiana.
- LANSING, O. E., JR., Chicago.
■ lizard — Pine, Indiana.
- LILJEBLAD, E., Chicago.
■ bee, 2 wasps — Memphis, Tenn.
- LONGLEY, W. E., Oak Park, Illinois.
4 parasites — Oak Park, Illinois.
- MANWELL, J. M., Chicago.
■ bumblebee — Chicago.
- MCCORMICK, CYRUS H., Chicago.
■ premolars and molars of horse.
5 beetles — Brazil.
- MILLSPAUGH, C. F., Chicago.
2 moths — Taormina, Sicily.
- MORRILL, MRS. A. D., Chicago.
■ mounted apteryx.
■ mounted bird of paradise.
- MOSELEY, E. L., Sandusky, Ohio.
■ snakes. ■ turtles, 1 salamander — Sandusky, Ohio (exchange).
10 snakes, 4 turtles — Sandusky, Ohio (exchange).
- MUELLER, FRED M., Chicago.
1 beetle — Germany.
- MUNZNER, H., Chicago.
1 beetle, ■ centipedes, 3 spiders — Illinois.
- NATIONAL MUSEUM, Costa Rica.
22 fishes — Costa Rica.
- O'BRIEN, B., Corliss, Wis.
1 mole cricket — Corliss, Wis.
- RIECK, A., Chicago.
■ bug — Chicago.
- SMITH, CASSIUS F., Chicago.
■ water bugs, 11 beetles — Illinois and Mexico.
- SMITH, H. L., Chicago.
■ wasp nests — Chicago.
- STEPHENSON, F. M., Chicago.
1 Mexican deer.
1 grizzly bear — El Paso, Texas.
■ cinnamon bears — El Paso, Texas.
- STRÉCKER, J. K., JR., Waco, Texas.
37 specimens beetles, dragon flies, velvet-ant, butterflies — Texas (exchange).

TRIGGS, CHAS. W., Chicago.

1 turtle — Canada.

VON LENDERKE & ANTOINE, Chicago.

1 great bustard.

WALKER, DR. J. W., Chicago.

1 butterfly — Millers, Indiana.

WATERBURY, J. C.

1 salamander — Chicago.

WALCOTT, A. B., Chicago.

1 tree toad — Beach, Illinois.

28 specimens larvae, scorpions, spiders, stoneflies, bugs, flies, etc.—
various localities.

WRIGHT, A. H., New Concord, Ohio.

2 great horned owl — New Concord, Ohio.

SECTION OF PHOTOGRAPHY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

FIELD MUSEUM OF NATURAL HISTORY.

Made by C. H. Carpenter:

2,667 negatives, 5,863 prints, 710 lantern slides, 46 enlargements,
609 negatives developed.

Made by F. C. Cole:

700 portraits of natives, landscapes, etc. — Philippine Islands.

Made by O. C. Farrington:

6 negatives of Old Chicago beaches.

6 negatives of general views — Murfreesboro, Arkansas.

11 negatives of general views — Kentucky.

Made by J. F. Perry:

75 negatives of bird studies, landscapes, etc. — Costa Rica and Panama.

30 negatives of bird studies, etc. — Illinois.

Made by N. Dearborn:

81 negatives of bird studies, landscapes, etc. — Venezuela.

Made by C. L. Dewey:

11 negatives of bird studies, etc. — Lake Geneva, Wisconsin.

Made by Geo. A. Dorsey:

168 negatives of general views, etc. — various localities.

220 negatives of natives, general views, etc. — New Guinea.

40 negatives of general views, portraits, etc. — various localities.

Made by Berthold Laufer:

43 negatives of general views, portraits, etc. — Sikkim, India.

Made by S. E. Meek:

54 negatives of fishing scenes, etc. — Great Lakes.

Made by C. F. Millsbaugh:

150 stereo negatives of general views, landscape, etc. — Foreign
countries.

Made by A. W. Slocum:

26 negatives of general views, etc. — Mississippi.



GAR PIKE GROUP.



LARGE-MOUTHED BLACK BASS GROUP.

Made by Huron H. Smith:

16 negatives of trees — Chicago.

120 negatives of trees — Missouri.

226 negatives of trees — West Virginia.

98 negatives of trees — Missouri.

Purchases:

■ colored lantern slides — Costa Rica and Panama.

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ACIREALE REALE ACCADEMIA DI SCIENZE, Acireale, Italy.

Rendiconti e memorie, ser. 3a, v. 4-5, 1904-1906.

ALABAMA AGRICULTURAL EXPERIMENT STATION, Auburn, Alabama.

Bulletin, current numbers (gift).

ALABAMA DEPARTMENT OF ARCHIVES AND HISTORY, Montgomery, Alabama.

Bulletin, no. 1.

ALLEN, GLOVER M., Cambridge, Massachusetts.

1 pamphlet.

AMBROSETTI, JUAN B., Buenos Aires, Argentina.

■ pamphlet.

AMERICAN ACADEMY OF ARTS AND SCIENCES, Cambridge, Massachusetts.

Memoirs, v. 13, no. 6.

Proceedings, current numbers.

AMERICAN ANTIQUARIAN SOCIETY, Boston, Massachusetts.

Proceedings, v. 19.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Proceedings, v. 56-58, 1907-1908.

AMERICAN ASSOCIATION FOR LABOR LEGISLATION, Madison, Wisconsin.

Proceedings, first annual meeting, 1907.

Women in industry (gift).

AMERICAN ASSOCIATION OF MUSEUMS, Pittsburgh, Pennsylvania.

Proceedings, v. 1, 1907 (gift).

AMERICAN CHEMICAL JOURNAL PUBLISHING COMPANY, Baltimore, Maryland.

Journal, current numbers.

AMERICAN FOLK-LORE SOCIETY, Cambridge, Massachusetts.

Journal, current numbers.

AMERICAN GEOGRAPHICAL SOCIETY, New York City.

Bulletin, current numbers.

AMERICAN INSTITUTE OF MINING ENGINEERS, New York City.

Bulletin, no. 18-24.

Yearbook, 1908.

AMERICAN MUSEUM OF NATURAL HISTORY, New York City.

Annual report, 1907.

Anthropological papers, v. 1, pt. 1-6; v. 2, pt. 1.

Bulletin, v. 23, 1907.

Journal, current numbers.

Memoirs, v. 14, pt. 2.

Memorial: Morris Ketchum Jesup.

Pamphlets.

AMERICAN ORIENTAL SOCIETY, New Haven, Connecticut.

Journal, v. 28, pt. 2.

AMERICAN PHILOSOPHICAL SOCIETY, Philadelphia.

Proceedings, current numbers.

AMES BOTANICAL LABORATORY, Boston, Massachusetts.

Contributions, no. 7-8.

AMSTERDAM K. AKADEMIE VAN WETENSCHAPPEN, Amsterdam, Netherlands.

Proceedings, v. 10.

Verhandlingen, v. 13, no. 4-6; v. 14, no. 1.

Verslagen, v. 16.

AMSTERDAM NEDERLANDSCH-ANTHROPOLOGISCHE VEREENIGING, Amsterdam, Netherlands.

Handelingen, no. 1-3.

ANGELIS, SABATINO DE, ET FILS, Naples, Italy.

Catalogue illustré (gift).

ANGERS SOCIÉTÉ D'ÉTUDES SCIENTIFIQUES, Angers, France.

Bulletin, v. 36.

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Department of Anthropology,	282	
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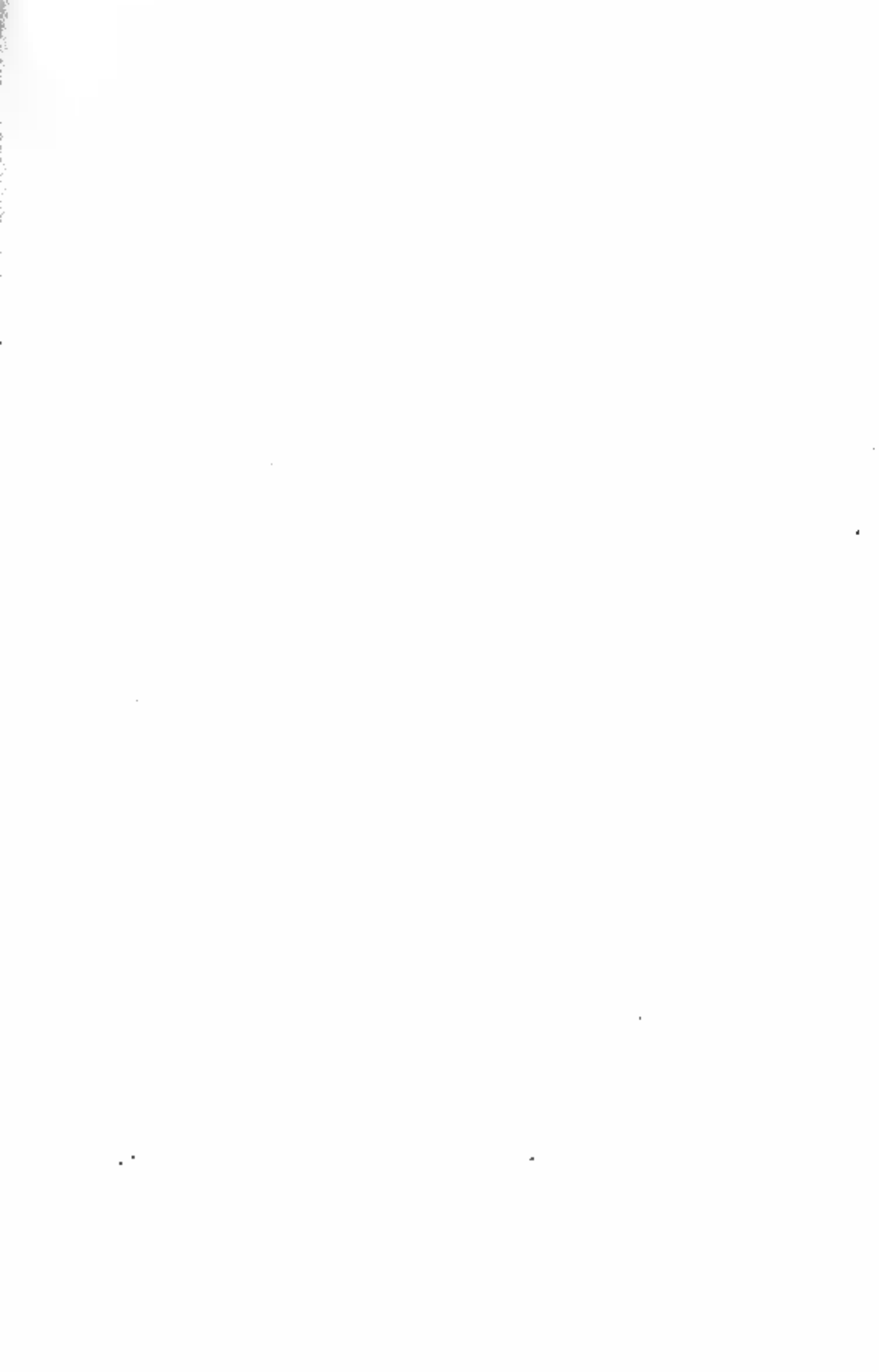
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YELLOW PERCH GROUP.



SUN FISH GROUP.

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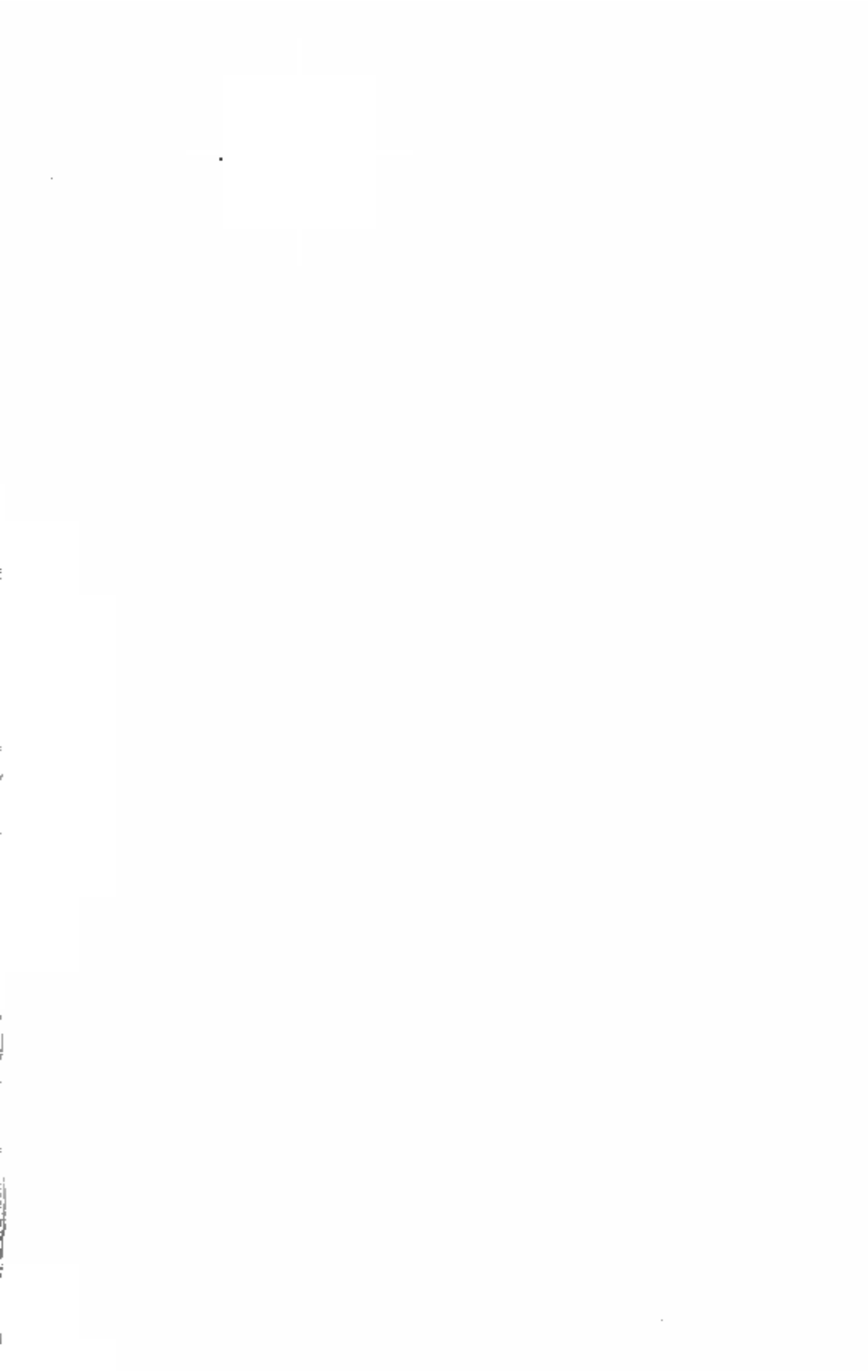
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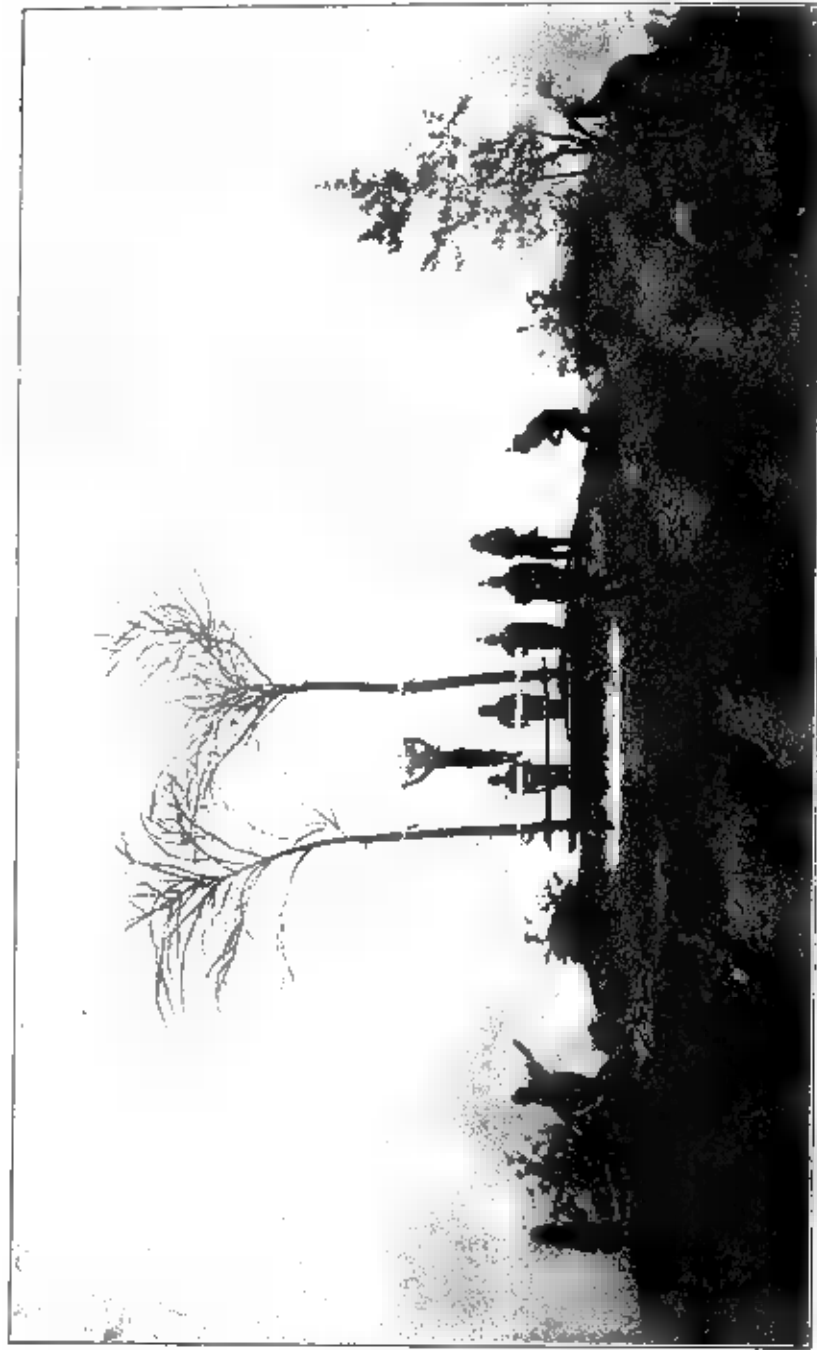
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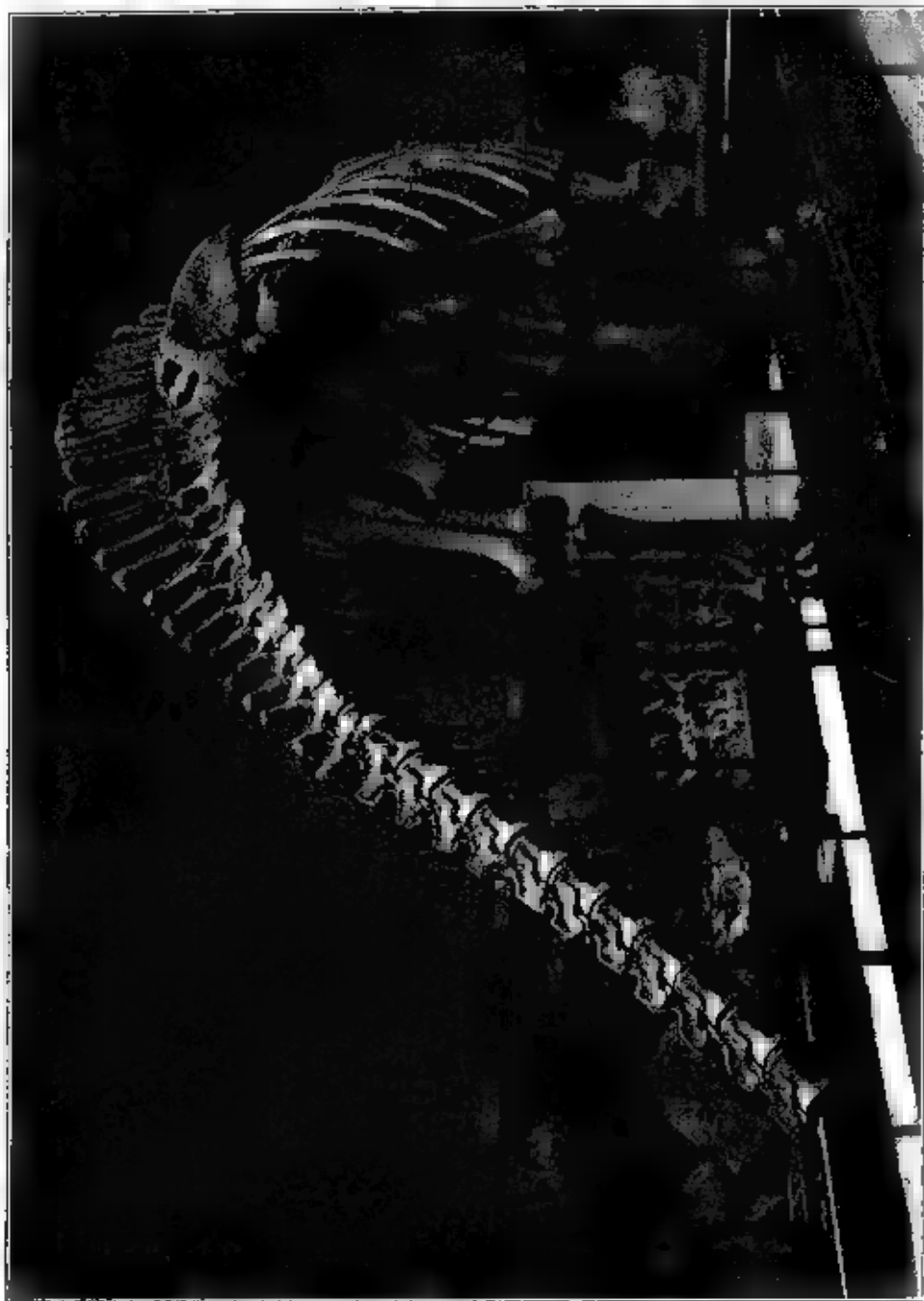
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- WESTERN UNIVERSITY OF PENNSYLVANIA, Allegheny, Pennsylvania.
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- WIEN. K. K. NATURHISTORISCHES HofMUSEUM, Wien, Austria.
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- WIEN. K. K. UNIVERSITÄT, Wien, Austria.
5 reports.
- WIEN. K. K. ZOOLOGISCH-BOTANISCHE GESELLSCHAFT, Wien, Austria.
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- WILLIAMSON, E. B., Bluffton, Indiana.
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- WILSON ORNITHOLOGICAL CLUB, Oberlin, Ohio.
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Annual report, no. 24, 1907.
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4 inaugural dissertations.
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- ZÜRICH UNIVERSITÄT, Zürich, Switzerland.
4 inaugural dissertations.



ARTICLES OF INCORPORATION.

STATE OF ILLINOIS.

DEPARTMENT ■ STATE.

WILLIAM H. HINRICHSEN, *Secretary of State.*

TO ALL ■ WHOM THESE PRESENTS SHALL COME, GREETING:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

Now, therefore, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSEN,

Secretary of State.

[SEAL.]

TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned, citizens of the United State, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination ■ knowledge, and the preservation and exhibition of objects illustrating Art, Archaeology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(Signed).

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohlfaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel P. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, Geo. F. Bissell, John R. Walsh, Chas. Fitzsimons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Scoy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George M. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphallet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS, } ss.
COOK COUNTY. }

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 8th day of November, 1903, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1903, in the office of the Secretary of State for Illinois.

AMENDED BY-LAWS.

(JANUARY 28, 1907)

ARTICLE I.

MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons, and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

First.—Free admittance for the member and family, to the Museum on any day.

Second.—Ten tickets every year, admitting the bearer to the Museum on pay days.

Third.—A copy of all publications of the Museum, when requested.

Fourth.—Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time, shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons, or Honorary Members, shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the _____ place and _____ the same day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars, at any one time, shall, upon the unanimous vote of the Board of Trustees, become a life member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board of Trustees upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SEC. 6. Honorary Members shall be chosen by the Board of Trustees from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

ARTICLE II.

BOARD OF TRUSTEES.

SECTION 1. The Board of Trustees shall consist of fifteen members. The respective members of the Board shall be in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled by a majority vote of the remaining members of the Board, and the election may be held at any regular meeting.

SEC. 2. Regular meetings of the Board shall be held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when a majority of Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

ARTICLE III.

OFFICERS.

SECTION 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary, and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as may ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

ARTICLE IV.

THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation. He shall make disbursements only upon warrants drawn by the Director

and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed.

SEC. 2. The securities and muniments of title belonging to the Corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities when the same become due, and pay same to the Treasurer. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SEC. 3. The Treasurer shall give bond in such amount, and with such sureties, as shall be approved by the Board of Trustees.

SEC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director. All vouchers executed for expenditures for the construction and maintenance of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

ARTICLE V.

THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of all of the property and affairs of the Museum, and shall control the operations of the institution, subject to the authority of the Board of Trustees and the Executive Committee. The Director shall be the official medium of communication between the Board, or its committees, and the scientific staff and maintenance force.

SEC. 2. There shall be four scientific departments of the Museum—Anthropology, Botany, Geology, and Zoology, each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board, upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director, upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and dismiss all other employees of the Museum.

SEC. 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month. At

the Annual Meeting, the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

ARTICLE VI.

AUDITOR.

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board.

ARTICLE VII.

COMMITTEES.

SECTION 1. There shall be four Committees, as follows: Finance, Building, Auditing, and Executive.

SEC. 2. The three Committees first above named shall each consist of three members, who shall be elected by ballot by the Board at the Annual Meeting, and who shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairmen by the order in which the members are named in the respective Committee; the first member named shall be Chairman; the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession in the chairmanship being in this order in the event of the absence or disability of the Chairman.

SEC. 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Auditing Committee, and three other members of the Board to be elected by ballot at the Annual Meeting.

SEC. 4. Four members of the Executive Committee shall constitute a quorum, and in all other standing committees, two members shall constitute a quorum. In the event that, owing to the absence or inability of members, a quorum cannot be present at any meeting of any committee, then the Chairman thereof, or his successor, as herein provided, may summon any member of the Board of Trustees to act in place of the absentee.

SEC. 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest, funds, subject to the approval of the Board.

SEC. 6. The Building Committee shall have supervision of the construction, reconstruction, extension, and maintenance of any kind and all buildings used for Museum purposes.

SEC. 7. The Executive Committee shall have supervision over all matters pertaining to the Museum. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommen-

dations as ■ expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the respective Committees shall be considered as authorized to make the expenditures detailed therein. No increase in the expenditures under any items of the Budget shall be made, except by authority of the Board of Trustees, but the Executive Committee shall have authority, in cases of emergency, to expend a further total sum not exceeding two thousand dollars in any one month.

SEC. 8. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SEC. 9. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 10. The President shall be ex-officio ■ member of all Committees, and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

ARTICLE VIII.

NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board, each year, a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, and the Auditing Committee, and for three members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting, and voted upon at the following Annual Meeting in January.

ARTICLE IX.

AMENDMENTS.

SECTION 1. These By-Laws may be amended at any regular meeting ■ the Board of Trustees by a two-thirds vote of ■ the members present, provided the amendment shall have been proposed at a preceding regular meeting.

HONORARY MEMBERS.

EDWARD B. AYER
HARLOW N. HIGINBOTHAM
CHARLES B. CORY

STANLEY McCORMICK
ROBERT F. CUMMINGS
MRS. TIMOTHY B. BLACKSTONE

DECEASED.

MARY D. STURGES.

PATRONS.

ALLISON V. ARMOUR
WILLIAM I. BUCHANAN
VERNON SHAW KENNEDY
GEORGE MANIERRE

FREDERICK W. PUTNAM
FREDERICK J. V. SKIFF
WILLARD A. SMITH
EDWIN WALKER

CORPORATE MEMBERS.

ADAMS, GEORGE E.	HIGINBOTHAM, H. N.
ALDIS, OWEN F.	HUTCHINSON, CHARLES L.
ARMOUR, ALLISON V.	JONES, ARTHUR B.
AYER, EDWARD E.	KENNEDY, VERNON SHAW
BARTLETT, A. C.	KOHLSTAAT, HERMAN H.
BLACK, JOHN C.	LATHROP, BRYAN
BLAIR, WATSON F.	McCORMICK, CYRUS H.
BLATCHFORD, ELIPHALET W.	MANIERRE, GEORGE
BUCHANAN, W. I.	MITCHELL, JOHN J.
BUCKINGHAM, EBENEZER	PATTERSON, ROBERT W.
BURNHAM, DANIEL H.	PECK, FERD. W.
BUTLER, EDWARD B.	PORTER, GEORGE F.
CHALMERS, W. J.	PUTNAM, FREDERICK W.
CHATFIELD-TAYLOR, H. C.	REAM, NORMAN B.
CLARK, JOHN M.	RYERSON, MARTIN A.
CRANE, RICHARD T., JR.	SKIFF, FREDERICK J. V.
CURTIS, WILLIAM E.	SMITH, BYRON L.
EASTMAN, SIDNEY C.	SMITH, WILLARD A.
ELLSWORTH, JAMES W.	SPRAGUE, A. A.
FIELD, STANLEY	STONE, MELVILLE E.
GAGE, LYMAN J.	WALKER, EDWIN
GETTY, HENRY H.	WALSEH, JOHN R.
GUNSAULUS, FRANK W.	
GUNTHER, C. F.	
HEAD, FRANKLIN H.	

DECEASED.

ARMOUR, PHILIP D.	McCAGG, E. B.
BAKER, WILLIAM T.	McCLURG, A. C.
BISSEL, GEORGE F.	McNALLY, ANDREW
CRAWFORD, ANDREW	PEARCE, J. IRVING
DAVIS, GEORGE R.	PETERSON, ANDREW
FITZSIMONS, CHARLES	PULLMAN, GEORGE M.
HALE, WILLIAM E.	SCHNEIDER, GEORGE
HARPER, WILLIAM R.	SCOTT, JAMES W.
HATCH, AZEL F.	STOCKTON, JOSEPH
JACKSON, HUNTINGTON W.	WALLER, R. A.
LEITER, L. Z.	WILLIAMS, NORMAN

LIFE MEMBERS.

ADAMS, GEORGE E.
ALDIS, OWEN F.

BARRETT, MRS. A. ■.
BARRETT, ROBERT L.
BARRETT, S. E.
BARTLETT, A. C.
BLACKSTONE, MRS. TIMOTHY ■.
BLAIR, CHAUNCEY J.
BLAIR, WATSON F.
BOOTH, W. VERNON
BURNHAM, D. H.
BUTLER, EDWARD B.

CARTER, JAMES S.
CARTON, L. A.
CHALMERS, WILLIAM J.
CRANE, R. T.

DEERING, CHARLES
DRAKE, TRACY C.

FARWELL, WALTER
FAY, C. N.
FIELD, STANLEY
FULLER, WILLIAM A.

GARTZ, A. F.
GRISCOM, CLEMENT A.
GROMMES, JOHN B.

HAMILL, ERNEST A.
HILL, LOUIS W.
HUGHITT, MARVIN
HUTCHINSON, C. L.

INGALLS, M. E.
ISHAM, MRS. KATHERINE PORTER

JOHNSON, FRANK S.
JOHNSON, MRS. ELIZABETH AYER.
JONES, ARTHUR B.

KING, FRANCIS
KING, JAMES C.
KIRK, WALTER RADCLIFFE

LAWSON, VICTOR F.

MCCORMICK, MRS.
MCCORMICK, CYRUS H.
MCCORMICK, HAROLD F.
MACVEAGH, FRANKLIN
MITCHELL, J. J.
MURDOCH, THOMAS

NEWELL, A. B.

ORR, ROBERT M.

PEARSONS, D. K.
PIKE, EUGENE S.
PORTER, GEORGE F.
PORTER, H. H.
PORTER, H. H., JR.

REAM, MRS. CAROLINE P.
REAM, NORMAN B.
REVELL, ALEX. H.
RUSSELL, EDMUND A.
RYERSON, MRS. CARRIE H.
RYERSON, MARTIN A.

SCHLESINGER, LEOPOLD
SINGER, C. G.
SMITH, BYRON L.
SMITH, ORSON
SPRAGUE, A. A.
SPRAGUE, OTHO S. A.
STURGES, GEORGE

THORNE, GEORGE R.
TREE, LAMBERT

WELLS, M. D.
WILLARD, ALONZO J.
WOLFF, LUDWIG

ANNUAL MEMBERS.

ADAMS, CYRUS H.
ADAMS, MILWARD
ALLERTON, ROBERT H.
AMBERG, WILLIAM A.
ARMOUR, GEORGE A.

BAILEY, EDWARD P.
BAKER, SAMUEL
BANGA, DR. HENRY
BARNES, CHARLES J.
BARRELL, JAMES
BECKER, A. G.
BILLINGS, C. K. G.
BILLINGS, DR. FRANK
BIRKHOFF, GEORGE, JR.
BLAINE, MRS. EMMONS
BLAIR, HENRY A.
BOAL, CHARLES T.
BOUTON, C. B.
BREMNER, DAVID F.
BROOKS, JAMES C.
BROWN, GEORGE F.
BROWN, WILLIAM L.
BURLEY, CLARENCE A.

CABLE, R. R.
CARPENTER, A. A.
COMSTOCK, WILLIAM C.
CONOVER, CHARLES H.
COOLBAUGH, MRS. ADDIE R.
COONLEY-WARD, MRS. L. A.
CORWITH, CHARLES R.
COWAN, W. P.
COX, ALFRED J.
CRANE, CHARLES R.
CUDAHY, JOHN
CUMMINGS, E. A.
CURTIS, D. H.

DAL, DR. JOHN W.
DAY, A. M.
DAY, CHAPIN A.
DEERING, JAMES

DEERING, WILLIAM
DILLMAN, L. M.
DUNHAM, MISS M. V.

EISENDRATH, W. N.
EMMERICH, EDWARD E.

FAIR, R. M.
FARNSWORTH, GEORGE
FORSYTH, ROBERT
FRANK, HENRY L.
FRASHER, JOHN E. L.
FULLER, O. F.
FÜRST, CONRAD

GAYLORD, FREDERIC
GLESSNER, J. J.
GOODRICH, A. W.
GORDON, EDWARD K.
GRAHAM, E. R.
GREEN, B. H. R.
GREY, CHARLES F.
GREY, WILLIAM L.
GURLEY, W. W.

HARDING, AMOS J.
HARRIS, GEORGE B.
HARRIS, JOHN P.
HARRIS, N. W.
HASKELL, FREDERICK T.
HERTLE, LOUIS
HITCHCOCK, R. M.
HOLDOM, JESSE
HOLT, GEORGE H.
HOPKINS, JOHN P.
HORNER, ISAAC
HOSKINS, WILLIAM
HOUGHTLING, JAMES L.

INSULL, SAMUEL

JEFFERY, THOMAS B.
JENKINS, GEORGE H.

JONES, J. S.

KEEPER, LOUIS

KEITH, W. SCOTT

KELLEY, WILLIAM E.

KENT, WILLIAM

KIMBALL, EUGENE S.

KIMBALL, MRS. MARK

LAMB, FRANK H.

LAWSON, VICTOR F.

LAY, A. TRACY

LEFENS, THIES J.

LEIGH, EDWARD B.

LINCOLN, ROBERT T.

LINN, W. R.

LOGAN, F. G.

LORD, J. B.

LOWDEN, FRANK O.

LYTTON, HENRY C.

MCCREA, W. S.

MCGUIRE, REV. H.

MCLENNAN, J. A.

MCWILLIAMS, LAFAYETTE

MACFARLAND, HENRY J.

MAGEE, HENRY W.

MANSON, WILLIAM

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FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 140.

REPORT SERIES.

VOL. III, No. 4.

ANNUAL REPORT OF THE
DIRECTOR

OF THE

BOARD OF TRUSTEES

FOR THE YEAR 1909.



CHICAGO, U. S. A.

January, 1910.



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ANNUAL REPORT OF THE DIRECTOR. 1909.

To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1909.

In the extension of its scientific operations into remote lands, and in the accumulation of material of great value from new fields consist the more important activities of the Museum for 1909. The expedition into Tibet, in the South Pacific Islands, and in the Philippines, and the acquisition of material by purchase from Egypt and German New Guinea, the Rothrock herbaria and library, and the collections made by subordinate Museum expeditions in Guatemala, British New Guinea, Bermuda, Fiji Islands, etc., have unitedly brought to the stores of the institution the most valuable material from every point of view that any year has recorded. This has been done without interference with the work of rearranging and labeling and recasing old material and the installation of new material in accordance with the plans for the occupation of the new building, inaugurated four years ago. In the introduction of new material to the exhibition series in all departments, and the consequent extension of geographical areas, scientific discrimination has resulted in considerable elimination of material in all departments, both because of space requirements and because of the transfer of apparent duplicates to the study collections, whereby the latter were rendered more complete in themselves without detracting from the interest of the exhibited collections, at least from a popular standpoint. In all the scientific departments increased storage facilities for duplicates and for exchange material have been provided and the spaces and systems for the accommodation of study material have been enlarged and improved. It will be observed too, that in response to the demands for reference books, necessary for the identification and description of material, the departmental libraries have had gratifying additions. The capacity of the printing shop has been doubled to meet the requisitions for labels, the output of which this year has greatly increased. The generous appropriations for exhibition cases for all departments have hardly equaled the requirements, but the pro-

vision made has resulted in a noticeable improvement in the physical appearance of the exhibition halls throughout the building, more especially in the Departments of Botany and Geology, which now present as near an appearance of completeness as it is desirable or possible for an active Museum to attain.

In the publications of the Museum for the year, Curator Cory's "Birds of Illinois and Wisconsin" has attracted much favorable and gratifying criticism, while the descriptive catalogue, by Prof. Tarbell, of the collection of reproductions of the bronzes in the Naples Museum, selected by Mr. Edward E. Ayer, constitutes by general consent ■ valuable contribution to the literature of classical archæology.

The murder of Dr. William Jones of the Department of Anthropology, while on an expedition for the Museum among the Ilongots of the Philippine Islands, was ■ shock to his associates in the Museum, no greater, however, than it was to his compeers and to student ethnologists throughout the world. Dr. Jones was a young man of the very best attainments in his chosen field, whose death came while performing service fully as patriotic and high in purpose as that actuating any man whose career has had a tragic close. The Museum has just learned of the intended return of Assistant Curator S. C. Simms, who visited the scene of Dr. Jones' last work and has secured the material and notes gathered by him and caused a suitable monument, funds for which ■■■ privately provided, to be erected at the spot where the body of Dr. Jones was buried. The Trustees have caused a bronze memorial tablet designed by Theodore Lescher to be cast for insertion in the wall surrounding the Philippine collection in the Museum.

The engagement of Curator Dorsey to prepare ■ series of articles on the ethnology and sociology of the Old World for publication in the Chicago Tribune, while depriving the Museum for a time of the important service of ■ much valued member of the scientific staff, is nevertheless so closely allied with the purposes and possibilities of the Department of Anthropology, that the arrangement might be said to enlarge its scope. The letters thus far published have attracted wide attention and there can be no doubt of the importance of this contribution to the knowledge of those concerned in the sociologic conditions of the world and those specially interested in the rapidly changing intellectual and moral averages of the United States by reason of the introduction into its body politic of the peoples undergoing the capable scrutiny of Dr. Dorsey. Among other changes in the staff is the acceptance by Mr. Wilfred H. Osgood of an appoint-



The Late Doctor William Jones.

ment to the Assistant Curatorship of Mammalogy and Ornithology. Mr. Osgood brings to the Department of Zoölogy ■ established reputation of high order. He is a scholar, an author, and an educator. His better known labors have been with the mammals of the Northwest Coast, and he is an acknowledged authority among the younger group of mammalogists. He is at present in London working up the Museum African material, in which it is believed a number of new types will be found. Prof. B. E. Dahlgren, the well known modeler in wax and glass, especially assigned to the Department of Botany, is an acquisition of importance. A number of striking pieces resulting from the art, skill, and scientific knowledge of Prof. Dahlgren have already been placed on exhibition in the Botanical gallery. One or more minor resignations have been offered in the scientific departments, capable men accepting advancement to higher positions in other institutions.

The creation by the Board of Trustees of an Administration Committee to which was assigned some of the duties theretofore imposed upon the Executive Committee, and the monthly meetings of this new Committee at the Museum, has been of distinct advantage in the ■ prompt consideration of important questions by the corporation authorities.

The President (Señor Don Manuel Estrada Cabrera) of the Republic of Guatemala requested the United States Bureau of Fisheries to recommend some person to make a survey of Lakes Amatitlan and Atitlan, for the purpose of determining whether and how the quantity and quality of the food and game fishes of those lakes could be increased. Assistant Curator Meek was recommended, because of his knowledge of and interest in Tropical fresh-water fishes. The survey was made by Dr. Meek while on a Museum expedition to Central America. The scientific result of this survey was recorded in a publication of the Museum, Vol. VII, pages 159 to 206. Three other Museum publications with a total of 75 pages resulted from this expedition.

By consent of President Higinbotham of the World's Columbian Exposition, the collection of sketch models loaned to the Museum by the World's Fair of 1893, which have been on exhibition in the Rotunda since 1894, were presented to the West Chicago Park Commissioners for exhibition in the public parks of the city, excepting a few pieces selected by and presented to the Art Institute. A number of these models have been installed in Garfield Park, and add ■ distinct note of artistic culture to the grounds.

MAINTENANCE.—The Annual Budget authorized by the Board of Trustees provided the sum of \$174,290 for the maintenance of the Museum for the fiscal year. The actual amount expended was \$145,512, leaving a balance within the anticipated expense for the year of \$28,778. In addition to the cost of maintenance, sums were expended for collections and new installation, expeditions, etc., that brought the total to \$198,472. As will be observed from the details of the financial statement, the total sum of \$21,163, in individual contributions has also been disbursed for special collections and expeditions.

LECTURE COURSE.—The Spring and Autumn Lecture Courses, comprising course number thirty in March and April and course number thirty-one in October and November, seventeen lectures in all, had the same gratifying attendance that has now become the custom. There have been few lectures when the demands for admission have not exceeded the capacity of the hall, and in no case has the attendance been unsatisfactory.

Following is the Thirtieth Free Lecture Course, with the subjects and lecturers, delivered during the months of March and April, 1909:

March 6. — "The R. F. Cummings' Philippine Expedition: Travels

Among the Bataks, Apayaos, and Tinguians."

Mr. F. C. Cole, Ethnologist.

March 13. — "The Nation's Resources and the Nation's Future."

Prof. Joseph A. Holmes, Geological Survey, Washington, D. C.

March 20. — "An Ancient Delta and its Fossil Treasures."

Prof. E. C. Case, University of Michigan.

March 27. — "The Yosemite National Park."

Mr. William E. Curtis, Washington, D. C.

April 3. — "Cross Roads in Evolution."

Dr. N. Dearborn, Assistant Curator of Ornithology.

April 10. — "Evolution of Swimming Animals."

Mr. E. N. Gueret, Assistant Curator of Osteology.

April 17. — "The German South Seas — I. Solomon Islands and New Ireland."

Prof. George A. Dorsey, Curator of Anthropology.

April 24. — "The German South Seas — II. New Guinea."

Prof. George A. Dorsey, Curator of Anthropology.

Following is the Thirty-first Free Lecture Course, with the subjects and lecturers, delivered during the months of October and November, 1909:

- Oct. 2. — "The Bermuda Islands."
Prof. Oliver C. Farrington, Curator of Geology.
- Oct. 9. — "Canadian Lakes."
Rev. Frederic Campbell, Brooklyn, New York.
- Oct. 16. — "Savage Mutilation and Ornament."
Dr. Walter Hough, United States National Museum,
Washington, D. C.
- Oct. 23. — "Patterns and Colors of Marbles."
Prof. Henry W. Nichols, Assistant Curator of Geology.
- Oct. 30. — "The Plant Life of the Sea."
Dr. Marshall A. Howe, Curator New York Botanical
Garden.
- Nov. 6. — "The Indians of the Painted Desert."
Mr. Frederick I. Mosen, New York City.
- Nov. 13. — "Our Present Knowledge of Human Lineage."
Dr. William Albert Loey, Department of Zoölogy,
Northwestern University.
- Nov. 20. — "Zoölogical Collecting in Alaska."
Prof. Wilfred H. Osgood, Assistant Curator of Mam-
malogy and Ornithology.
- Nov. 27. — "Southern Florida and its Fishes."
Dr. Seth E. Meek, Assistant Curator of Zoölogy.

PUBLICATIONS.—The following list is presented of the publica-
tions issued since the date of the last report, with the number of
pages and illustrations:

- Pub. 129. — Geological Series, Vol. III, No. 7. Notes on Various
Minerals in the Museum Collection. By O. C. Far-
rington and E. W. Tillotson, Jr. 32 pp., 17 illustra-
tions (1 colored plate), edition 1,500.
- Pub. 130. — Anthropological Series, Vol. VII, No. 3. Catalogue of
Bronzes, etc., in Field Museum of Natural History.
By F. B. Tarbell. 144 pp., 300 half-tones, edition
2,500.
- Pub. 131. — Zoölogical Series, Vol. IX. The Birds of Illinois and
Wisconsin, by C. B. Cory, 764 pp., illustrated, edition
2,500.
- Pub. 132. — Zoölogical Series, Vol. VII, No. 7. New Species of
Fishes from Tropical America. By S. E. Meek. 5
pp., edition 1,500.

- Pub. 133. — Report Series, Vol. III, No. 3. Annual Report of the Director to the Board of Trustees, for the year 1908. 108 pp., 10 illustrations (half-tones), edition 2,500.
- Pub. 134. — Geological Series, Vol. IV, No. 1. New Echinoids from the Ripley Group of Mississippi. By A. W. Slocum. 16 pp., 3 half-tones, edition 1,500.
- Pub. 135. — Ornithological Series, Vol. I, No. 4. Catalogue of ■ Collection of Birds from British East Africa. By Ned Dearborn. 49 pp., 1 map, edition 1,500.
- Pub. 136. — Botanical Series, Vol. II, No. 7. *Præunciæ Bahamenses* — II. ■ Contribution to ■ Flora of the Bahamian Archipelago. By C. F. Millspaugh. 32 pp., edition 1,500.
- Pub. 137. — Ornithological Series, Vol. I, No. 5. The Birds of the Leeward Islands, Carribean Sea. By C. B. Cory. 63 pp., 1 map, edition 1,500.
- Pub. 138. — Zoological Series, Vol. X, No. 1. A Peculiar Bear from Alaska. By W. H. Osgood. ■ pp., 1 half-tone, edition 1,500.

The Museum exchange list now numbers 1,241 names, of which 649 are in foreign countries and 592 in the United States and its possessions.

The following table shows the number of exchanges with each of the foreign countries:

Argentine Republic	12	Great Britain	105
Australia	23	Greece	2
Austria	38	Italy	32
Belgium	18	India	16
Borneo	1	Japan	7
Brazil	8	Java	4
British Guiana	2	Liberia	1
Canada	28	Malta	1
Central America	6	Mexico	17
Ceylon	2	Netherlands	18
Chili	■	New Brunswick	1
China	1	New Zealand	6
Cuba	4	Norway	8
Denmark	7	Peru	2
East Africa	1	Portugal	■
Egypt	1	Roumania	1
France	57	Russia	19
Fiji Islands	1	Spain	■
Germany	133	Sweden	14

Switzerland	16	Uruguay	1
South Africa	12	West Indies	4
Tasmania	3	Yucatan	1
Trinidad	1		
U. S. Colombia	1		649

The following table shows the number of foreign exchanges receiving the different publications:

Anthropological	241
Botanical	337
Geological	314
Ornithological	212
Zoological	287
Report	649

The publications are distributed to the different States and Insular Possessions as follows:

Alabama	2	New Jersey	16
Arkansas	1	New York	83
California	26	North Carolina	6
Colorado	12	New Mexico	2
Connecticut	23	Ohio	17
Delaware	2	Oklahoma	1
District of Columbia	70	Oregon	1
Florida	2	Pennsylvania	41
Illinois	57	Rhode Island	1
Indiana	12	South Dakota	2
Iowa	13	Tennessee	2
Kansas	7	Texas	3
Kentucky	2	Utah	2
Louisiana	3	Vermont	4
Maine	7	Virginia	3
Maryland	1	Washington	4
Massachusetts	1	West Virginia	4
Michigan	13	Wisconsin	16
Minnesota	9	Wyoming	2
Mississippi	3	Philippine Islands	2
Missouri	14	Porto Rico	1
Montana	1	Hawaii	6
Nebraska	7		
Nevada	2		591
New Hampshire	2		

The following table shows the number of domestic exchanges receiving the different publications:

Anthropological	247
Botanical	324
Geological	326
Ornithological	166
Zoological	276
Report	591

THE LIBRARY.—The Library now contains 50,639 volumes distributed as follows:

General library	35,038
Anthropological library	2,136
Botanical library	4,884
Geological library	5,984
Zoological library	1,894
Library of Exposition Literature	793
	<hr/>
	50,639

The additions for the year consist of 3,152 books and pamphlets. Including books received with collections, gratifying additions have been made, though the continued source of growth is through exchanges, the publications received in this way being quite an element in the library's accessions. During the year approximately 500 letters have been written soliciting exchanges from contemporary societies not on the exchange list. A number of favorable replies have already been received and exchanges effected. The largest single acquisition received was that which accompanied the Rothrock herbarium, consisting of 342 books and 380 pamphlets. Many of the books filled gaps in the Museum collection, and where they duplicated, the corresponding copy was placed in the Departmental library. The Rothrock library is valuable in that it is representative of the botanical activities of many years and contains volumes of ■■■ works. It is also interesting and significant to note that the price has advanced over the original cost of many of the books in the collection from fifty to seventy-five per cent. Other noteworthy acquisitions were received from the following: Madame Leo Errera, Brussels; Mrs. Henry Dibblee; Mr. Edward E. Ayer; Academie des Sciences de L'Empereur Francois Joseph I, Prague; Botanic Gardens, Copenhagen; Deutsch Natur. Medisin. Verein fur Bohm; K. Universitets Bibliotek, Lund; Royal Botanic Gardens of Calcutta; Royal Gardens, Kew; and Superintendent of Documents, Washington. Twenty-five volumes of *Linneana* were loaned by the University of Chicago to the Museum for use in the Department of Botany. Collaboration has been rendered in the second edition of the *Union List of Serials* for the libraries of Chicago, and 1,017 titles have been supplied. The list in preparation is to be published by the John Crerar Library. The first edition of this publication has proven of value both to the staff and students generally. An earnest effort is being made to dispose of the unaccessioned duplicate material now in the Library. A list of this material was submitted to each Curator from which

to select such material as might be desirable to retain. The remainder was then classified and twenty-five typewritten lists were sent to as many societies and libraries, with request for exchange. It is evident from replies received that the majority of these institutions did not have their duplicate material available for exchange. However, small exchanges were effected, and as several of the lists are still out, it is possible that some further exchanges may be made. By request of the United States Department of Agriculture 375 duplicate bulletins and circulars received from that department were returned for redistribution. Fourteen thousand two hundred and twenty cards have been written and inserted in the card catalogues. Monthly installments of the John Crerar Library catalogue have been received. To accommodate the ever increasing card catalogues in the library it became necessary to again add to the card cabinet. In view of the future use of these cabinets it seemed wise that, instead of adding to the wooden cabinets now in use, purchase be made of steel cabinets. A satisfactory type has been adopted.

DEPARTMENTAL CATALOGUING, INVENTORING, AND LABELING.—The most important collections catalogued in the Department of Anthropology have been the R. F. Cummings' Philippine Collection, secured by Mr. F. C. Cole among the Tinguian and near-by tribes of Northwestern Luzon, and also among the pigmy Bataks and the Taghanua of Palawan; the collections secured by the Curator in 1908 in India, Ceylon, Sumatra, Java, New Ireland, Admiralty and Solomon Islands; also the superb Parkinson collection from German New Guinea, the gift of Mr. Joseph N. Field of Manchester, England. Additions have been made to the classified Tribal Lists, and the Card Catalogue for the Department has been maintained. 5,400 catalogue cards were written and entered in the Inventory Books, which now number 33. The work of labeling has also continued with gratifying results. 3,725 new black labels were placed in the department, distributed as follows: 525 in the Igorot collection; 930 in the Tinguian, Apayao and Kalinga collections; 835 among the Bella Coala, Tsimshian, and Haida exhibits. The work of labeling the North Court, with its alcoves, has practically been completed. For this purpose 1,350 standard black labels, and aluminum ink, were used. About 85 other large case and hall labels of varying size were placed here and there throughout the department.

The Curator of the Department of Botany reports that the labeling of specimens in cases being installed, and those previously

lacking labels, has been more satisfactory than in previous years: 42 cases have been fully labeled with the prospect of a completely labeled installation by Spring. During the addition of the labels to previously installed collections a number of these were rearranged, and two cases entirely reinstalled, to meet the demands of better methods. The mounting and cataloguing of the smaller accessions of the year is complete, while heavy inroads upon the material in the larger herbaria have been made. 31,679 specimens have been catalogued in the 54 record books of the department, of which 13,959 were from the University of Chicago herbarium and 6,000 from the Rothrock collection. The Geographic index and that of the Collectors are both complete to date. The card indices of the department library and of economic plant names have multiplied, 1,250 cards having been written and organized into the 15,850 now in the cases.

All specimens in the Department of Geology received during the year have been inventoried and catalogued, as received, the number of entries for the year being 4,102 and the total number on the Department books 103,081. Sixty cards have been added to the catalogue of vertebrate fossils and a complete card catalogue of the Department library has been made. This numbers to date 1,816 cards. A considerable number of temporary written labels have been prepared and placed in the collections to serve until printed ones can be provided. About 400 such labels were prepared for the collections in Halls 65 and 66, and about 300 for the collections in Hall 72. Some of the latter are more or less descriptive. Sixty-two printed labels have been prepared and distributed in the gem collection in Higinbotham Hall, completing the labelling of this collection, and 271 paleontological labels, some of them descriptive, have been made and distributed in the paleontological collections. In addition, copy for about 800 labels chiefly relating to the economic collections has been prepared and placed in the hands of the printer.

The cataloguing and labeling of specimens in the Department of Zoölogy has continued and at a rate exceeding that of the increase of the collections and encourages the belief that this work, which has fallen behind on account of sudden large accessions in the past, will soon be abreast of other routine work. During the year, about 8,000 regular catalogue entries were made, including 6,700 in Ornithology, 1,200 in Mammalogy, and 100 in Oölogy. Many of the specimens thus catalogued have required new labels and these have been supplied, while a large percentage of the entries have been recorded in the systematic card catalogues. Labels for exhibition specimens have





Hall 72. Ores of the Precious Metals and Lead.

been prepared and installed from time to time as required. The entire collection of both mammals and birds has been critically examined with regard to possible damage by insects and found to be in excellent condition. Material in pickle has been carefully examined and supplied with fresh preservative. This material, which consists mostly of skins of large mammals secured by Museum expeditions, is being removed from pickle and dressed as fast as possible. Since July 1, about 150 of these large skins have been treated by the tanners.

The year's work on catalogues and inventorying is shown in detail below.

	No. of Record Books.	Total No. of Entries to Dec. 31, 1909.	Entries during 1909.	Total No. of Cards Written.
Department of Anthropology	33	99,543	5,403	103,933
Department of Botany . . .	54	276,421	31,679	.....
Department of Geology . . .	20	103,081	4,102	6,740
Department of Zoology . . .	40	81,206	9,077	28,718
The Library	12	72,037	8,216	90,300
Section of Photography . . .	6	80,762	11,344	.....

ACCESSIONS.—Among the most important accessions of the year in the Department of Anthropology should be mentioned the two collections from German New Guinea, one from Huon Gulf, numbering 500 specimens; another, a general collection of more than a thousand pieces, from the central coast region. The latter includes carved posts, large carved canoes, and two rare dance masks from Hansa Bay, the larger one more than 16 feet in height. These valuable acquisitions were the gift of Mr. Joseph N. Field of Manchester, England. The material obtained by Mr. Ayer last year but not prepared for exhibition until last Spring consisted of 18 strings of beads, composed of carnelian, glass, and glazed earthenware; 18 mortuary stone vases and jars of great beauty and value, among which is a beautiful alabaster vase for ointment; 49 weights of a wide range of sizes, made of stone and copper; ■ mirror and bottle, each of bronze; 16 stone statuettes, some in a more or less fragmentary condition, among which is a beautiful figure of Osiris and also ■ fine red stone statue of the twelfth dynasty (inscribed "His father Teta, His mother Nefertari"); 4 mortuary cloths (in frames upon the east wall of Hall 9); 1 coffin lid of wood; 8 coffin lids of stone, all somewhat fragmentary, with one exception; a large, inscribed brick; 4 burnt clay mortuary offerings; 2 wooden mortuary boxes; 2 small mortuary figures of wood, one containing a rectangular cavity for receiving a papyrus; a mummied hawk; ■ mummied antelopes;

the head of a mummy, ■ mummy and ■ rectangular coffin. In addition to several wood carvings and stone tablets there are colored casts of 27 stones in Hatshepsa Temple, representing the procession of the Sacred Boat. Of very special interest is a small wax figure, of the Ptolemaic Period, in the form of Osiris, Lord of Bekha (the Eastern Mountain), found at Tehneh, Province of Mirich, Upper Egypt. Within it is the mummy of a falcon. With the figure are images of 4 genii, along with cakes of ■■ undetermined substance. A portion of this accession consisted of a small group of cinerary vessels from Etruria and ancient Roman bronze vessels, now installed in the North Court. The two large Mastaba tombs, excavated under the direction of Mr. Edward E. Ayer at the Necropolis of Sakara, one of them being the gift of Mr. Martin A. Ryerson, referred to in the 1908 report as anticipated accessions, were received at the Museum the past year and given storage in a special brick room constructed at the east unused entrance of the Museum, as it was not considered advisable to erect the tombs in the present building. The tombs filled 206 large cases, some of them ten feet in length, the total shipment weighing 96 ■■■■; the installation of one of the stelæ in Egyptian Hall is referred to in another part of this report. Among gifts from Mr. Edward E. Ayer were two rare, carved wooden images from New Ireland. Mr. R. F. Cummings gave ■ small Mangyan collection, made by Dr. Fletcher Gardner, Bloomington, Indiana, while serving as ■ surgeon in Mindoro. This accession is valuable, owing to the ■■■■ scarcity of cave material in the Philippines, about 50 specimens of the lot coming from the burial cave of Pokanin, midway between the towns of Bulalacao and Mansalay in Southern Mindoro. Other interesting gifts were 8 paintings of Hopi Indians by E. W. Burbank, presented by Mr. Stanley McCormick, and a unique woven garment, ornamented with tufts of human hair, found in an old mission of Lower California by Mr. W. H. Dupee of Chicago and by him given to the Museum. Of the important and interesting accessions by purchase, were an Egyptian sarcophagus of granite, ■ collection of Kabyle (Algiers) jewelry, and several Assanian and Babylonian seals collected by Mr. Ayer. Mention should be made of a small accession from Angola, West Central Africa, which forms a valuable addition to the Woodside-Ovimbundu collection.

The most conspicuous addition to the herbarium during the year is that of the personal herbarium and library of Dr. J. T. Rothrock, who, as a member of several of the early surveys of the West, not only amassed large and valuable collections himself, but through his asso-

ciation with Dr. Asa Gray, Dr. George Thurber, Dr. John Torrey and other early botanists, was able to secure many rare plants and sets of plants. His herbarium consists of nearly 25,000 sheets, largely from the west, north and southwest, Mexico and Florida. It contains long series of the plants of Bean, Berlandier, Bigelow, Bischoff, Bolander, Brendel, Burk, Canby, Chapman, Clinton, Curtiss, Garber, Ghiesbright, Hall and Harbour, Sutton Hayes, Kellogg, Kenney, Lemon, Leow, Mann, John Stuart Mill, Palmer, Parry and Palmer, Pope, Porter, Pringle, Regel, Reverchon, Thurber, Vasey, Ward, Wolf, and Wright. This herbarium comprises collections made principally from 1840 to 1880, thus directly supplementing that of Patterson, secured by the Museum some years ago, which dates from 1880 to 1900. The Rothrock herbarium is mostly mounted and 6,000 sheets have already been put through and placed in the organized herbarium of the Museum. The other notable herbaria now incorporated with that of the Museum ■■■ those of Dr. Arthur Schott, M. S. Bebb, H. N. Patterson, C. F. Millspaugh, A. A. Heller, John K. Small, L. J. Wahlstedt, A. S. Hitchcock, and the University of Chicago. Other series secured to the herbarium this year are: Clemens, Philippine, 1,150; Bloomer, Arizona, 900; von Tuerckheim, Guatemala, 406; Conzatti, Mexico, 185; Purpus, Mexico, 523; C. R. Barnes and Land, Mexico, 303; Stewardson Brown, Bermuda, 150; S. S. Visser, Dakota, 198; Botanic Gardens, Natal, 105; Fiebrig, Paraguay, 155; Tracy, Gulf States, 507; Britton and Harris, Jamaica, 770; J. T. Rothrock, Bahamas, 162; L. J. K. Brace, Bahamas, 231; Percy Wilson, Bahamas, 489; R. A. Dixon, Illinois, 400; Wright, Illinois, 139; J. H. Maiden, New South Wales, 100; W. E. Broadway, Trinidad and Tobago, 450; J. Macoun, Canada, 335, and H. H. Smith, Georgia, 479. Arranged geographically the specimens added ■■■ the organized herbarium during the year are as follows:

	University of Chicago Loan.	Museum Addition to Herbarium.	Total Herb'm*
Alaska . . . . .	...	195	537
Canada (in general)	38	3	1,050
Alberta . . . . .	...	47	331
British Columbia . . . . .	...	103	793
Newfoundland	244	...	404
Quebec	9	...	45
United States			
Alabama	20	39	793
Arizona	1,227	1,867	6,634

* Totals are from these few geographic ■■■ only. This does not tabulate the whole herbarium.

United States	University of Chicago Loan.	Museum Addition to Herbarium.	Total now in Herb'm.
Arkansas	3	...	188
California	1,804	1,367	16,769
Colorado	295	1,094	6,754
Dakota . . . . .	...	...	24
North Dakota . . . . .	...	4	47
South Dakota . . . . .	...	198	282
District of Columbia	1	...	1,815
Florida	131	175	15,987
Georgia	13	546	4,102
Illinois	252	360	16,067
Indiana	106	34	3,440
Iowa	3	...	1,282
Kentucky	258	...	644
Louisiana . . . . .	...	2	945
Maine	228	1	1,093
Massachusetts	2	1	2,052
Mexican Boundary . . . . .	...	30	1,300
Michigan . . . . .	...	12	2,111
Minnesota	1	...	580
Mississippi	5	40	1,860
Missouri	1	8	651
Montana	20	5	2,070
Nevada	5	39	401
New Hampshire	40	...	977
New Jersey	71	1	1,492
New Mexico	113	122	2,266
New York	114	21	4,772
North Carolina	232	36	1,133
Oklahoma . . . . .	...	125	286
Oregon	795	9	4,913
Pacific Coast	104	...	470
Pennsylvania	2	3	6,491
Rocky Mountains	1	...	728
South Carolina	3	...	547
Southwestern States	74	...	74
Tennessee	10	8	681
Texas	1,402	695	6,056
Utah	417	362	1,322
Vermont	183	23	1,302
Virginia	331	2	1,978
Washington	883	...	4,291
West Virginia . . . . .	...	36	1,254
Wisconsin . . . . .	...	4	745
Wyoming . . . . .	...	126	863
Yellowstone Park	3	...	267
Bahamas			
Andros Island . . . . .	...	4	1,264

	University of Chicago Loan.	Museum Addition to Herbarium.	Total now in Herb'm.
Bahamas			
Cat Island . . . . .	...	18	446
Crooked Island . . . . .	...	20	331
Eleuthera . . . . .	...	71	664
Fortune Island . . . . .	...	21	344
Inagua . . . . .	...	21	441
Long Island . . . . .	...	1	141
Mariguana . . . . .	...	1	169
New Providence . . . . .	...	440	2,386
Hog Island . . . . .	...	121	190
Riding Rocks . . . . .	...	13	13
Salt Cay Bank			
Elbow Cay . . . . .	...	7	7
Water Cay . . . . .	...	26	26
Anguilla . . . . .	...	134	134
Cat Sal . . . . .	...	43	43
Watling's . . . . .	...	9	458
Bermuda . . . . .	...	151	627
West Indies			
Cuba . . . . .	...	167	5,093
Dominica . . . . .	...	2	78
Grenada . . . . .	...	24	801
Jamaica . . . . .	...	780	6,056
Porto Rico . . . . .	...	1	3,069
St. Kitts . . . . .	...	1	10
St. Thomas . . . . .	...	11	418
Tobago . . . . .	...	16	56
Trinidad . . . . .	...	310	394
Mexico	3,138	2,268	25,402
Coronados Island . . . . .	...	2	10
Lower California	227	20	1,632
Central America			
Costa Rica	116	...	487
Guatemala	584	423	2,141
Honduras	75	...	484
Panama . . . . .	...	7	51
South America			
Argentina	1	...	824
Paraguay . . . . .	...	155	1,192
Venezuela . . . . .	...	17	959
Europe			
Denmark . . . . .	...	1	1
Germany . . . . .	...	1	4,051
Italy	3	...	917
Sardinia	1	...	2
Asia			
India	2	...	727
Palestine . . . . .	...	23	1,134

	University of Chicago Loan.	Museum Addition to Herbarium.	Total now in Herb'm.
Asia			
Philippines . . . . .	...	1,150	2,328
Siberia . . . . .	...	60	468
Africa . . . . .	...	...	3,833
Madagascar . . . . .	...	7	0
Natal . . . . .	...	105	764
Australia . . . . .	...	206	1,190
Total	13,607	14,819	

Total increase of the organized herbarium during the year, 28,426 specimens.

In Geology the gift of the Tonopah meteorite, weighing nearly two tons, is a notable accession. This was presented through the generosity of Messrs. Stanley Field, R. T. Crane, Jr., Cyrus H. McCormick, and George F. Porter, of the Board of Trustees. The mass was obtained entire and is the largest meteorite specimen in the Museum collection as well as one of the largest known. The meteorite exhibits atmospheric shaping and pitting in a remarkable degree. A very interesting specimen of copper boulder weighing 22 pounds found near Lake Geneva, Wisconsin, and a specimen of asbestos from Canada, were presented by Mr. Edward E. Ayer of the Board of Trustees. Mr. William J. Chalmers of the Board of Trustees kindly added to the Chalmers crystal collection a superb crystal of golden beryl showing negative crystals. From Thomas S. Chalmers were received three specimens of gold ore from Cripple Creek, Colorado, showing some of the richest ore found in the early days of the Independence Mine. A large collection, comprising over 300 specimens, of native copper, silver, calcite, hematite, datolite, and other minerals and fossils, chiefly from the Lake Superior region, was received from Mrs. Joseph Austrian of Chicago. The collection was made by her husband, the late Mr. Austrian, during the early days of copper mining in the Lake Superior region and hence contains many specimens no longer procurable. From F. Pereira Gamba were received 11 specimens of gold ores and associated rocks of Colombia; from Nippon Toki Gomei Kwaisha 12 specimens of clays and other minerals used in the manufacture of Japanese porcelains; from L. V. Kenkel a large photograph, 5 feet in length, of the Miles glacier, and other photographs of Alaska; from President John Goff 45 specimens of fossil echinoids from Mississippi; and from W. W. Newberry 24 specimens oolite and fossils from Oklahoma. By exchange, specimens of the Dokachi and Futtehpur meteorites were obtained from

the Geological Survey of India, and from Grabel, Wendler & Co., a specimen of the Buschhof meteorite and ten specimens of minerals. Important material obtained by purchase included an unusually complete mastodon skull from Yorkville, Illinois, and a nearly complete skeleton of the rare fossil beaver-like animal *Castoroides ohioensis* from Indiana. A large slab $31\frac{1}{2}$ square feet in area showing over 200 calices of the fossil crinoid *Uintacrinus* from Kansas and a series of well-preserved crinoids from the Kinderhook group of Le Grand, Iowa, were also obtained by purchase. Accessions by collection include several hundred specimen fossils of Bermuda; about 200 specimens of ores and minerals of the Pacific Northwest and Alaska, obtained from exhibitors at the Seattle Exposition; 76 specimens of fossils, ores and minerals from Oklahoma and nearly 3,000 specimens of invertebrate fossils from Wilmington, Illinois, and adjoining localities.

The acquisitions during the year in the Department of Zoölogy were extensive and important, comprising 122 mammals, 1,170 bird skins, 300 eggs, 4,989 specimens of fishes, and 201 reptiles. An interesting and important collection of mammals and birds was obtained through the kind offices of Mr. Rodway of the Georgetown Museum, British Guiana. Mr. Rodway's interest in the Museum is gratifying and highly appreciated. Approximately 1,300 of the fishes were collected on the Florida Keys by Assistant Curator Meek; 30 specimens were collected in Venezuela by Mr. J. F. Perry, and the remainder from near Chicago by Mr. Hildebrand. A large collection of mostly fresh-water fishes was purchased from Mr. Woolman. The collection contains many rare species from the Southern States and from Mexico. Of the reptiles, 71 important ones were collected on the islands near Venezuela by Mr. Perry, and the next in importance were secured through exchange from Mr. Hunter of St. Louis. The acquisitions in the Division of Entomology consisted mainly of small lots of insects, mostly of local species, though by purchase 163 specimens were obtained from Charles Weber, who collected them on the island of Palawan, Philippine Islands.

EXPEDITION AND FIELD WORK.—One of the most important expeditions of the year has been that of Assistant Curator Simms in continuation of the survey of the Philippine Islands, the funds for which are provided by Mr. Robert F. Cummings. On his arrival at Manila Mr. Simms proceeded to the Cagayan valley with the object of assembling the material collected by Dr. Jones and arranging for its dispatch to Manila. Dr. Jones, having made an exhaustive study

of the Ilongots of Dumabatu, Tamsi, Alicad, and Cagadyangan, and having assembled his collections at Dumabatu, was preparing to raft them to Echaque, when he was killed by natives. The following report from Assistant Curator Simms, dated November 28, 1909, from Tagudin, Mt. Province, is of interest: "I have the pleasure to report that my stay in the Ifugao territory (where I journeyed after completing my work in connection with the affairs of the late Dr. Jones) was one of success, having collected more than a thousand specimens forming a typical and comprehensive collection from this interesting people, who, up to the time of making this collection were but poorly represented in the Museum. In this collection there is a full size typical house, also forges, models, objects in progress of manufacture, etc. My next scene of investigation and collecting was among the Igorot of the sub-province of Amburayan — principally at Bacun and immediate vicinity. From this little known area I made a collection of several hundred specimens which greatly increase the value of an already large and valuable collection of Igorot material, by the filling in of a previously existing gap. I sincerely hope to get my material shipped soon, that it may reach Chicago the first of the coming year." The collections of Dr. Jones and Assistant Curator Simms are now in transit from Manila. Dr. Berthold Laufer continued his ethnological survey of Tibet under the Blackstone fund. Early in May, Assistant Curator Lewis left for New Guinea and the adjacent islands, beginning the three years survey under the Joseph N. Field South Pacific Islands Fund. After a brief stay in Hawaii he proceeded to the Fiji islands, where he was able to secure a fairly comprehensive collection, comprising about 70 type specimens, baskets, mats, posts, fishing outfits, etc., in various stages of completion. From Fiji Mr. Lewis journeyed to Sydney, Australia, and from thence to Herbertshöhe, Bismark Archipelago. From here, without delay, he set out upon a trip along the coast of German New Guinea, from Huon Gulf to Berlin Hafen, with the intention of returning to the former locality to begin work. Early in October Mr. Cole returned to the Philippines on his second R. F. Cummings' Expedition, to make investigations among the wild tribes of the southern islands. He will first work among the Mangyans of Mindoro, a Malayan tribe having a written language quite different from that used by other Malayan people. After visiting certain sections of Palawan he will go to Negros for a somewhat lengthy sojourn. Upon completion of this work he will go to Mindanao for an extended stay among pagan tribes found toward the interior of that island.

Three field trips in the interest of the Department of Botany have been successfully made during the year. The herbarium staff spent a week among the sandstone outcrops of the Starved Rock region, not only to assure a representation of the plants of that interesting locality in the herbarium, but to secure valuable exchange material. This trip resulted in 183 specimens, and 11 sets of specimens for exchange with other herbaria. Mr. R. A. Dixon, one of the preparators of the department, made a like trip to Madison, Montgomery, and Walther counties, Texas, securing 189 specimens for the herbarium and 575 specimens for exchange. Mr. Huron Smith, Dendrologist, made his field base this year in the mountains of West Virginia and Northern Georgia where he collected 149 tree specimens, 110 negatives of trees, 250 herbarium specimens of trees, 592 specimens of various plants for the general herbarium, and 1,342 specimens for exchange. Mr. B. E. Dahlgren made a trip to Jamaica in February and March to secure studies and specimens of tropic fruits for reproduction. From this expedition he returned 117 specimens, molds, and mounts together with a long series of water-color studies of living plants and fruits in situ. In his work on the island he was generously accorded accommodations at the Hope Botanical Gardens at Kingston and material assistance by the Director, Mr. H. H. Cousins, Mr. William Harris, and other members of the staff.

In March a trip was made to the Bermuda Islands by the Curator of Geology and full series obtained illustrative of the coral and æolian limestones, cave products, soils and erosion forms of these islands. Of the latter forms, two large potholes nearly two feet in depth collected were especially important in illustrating these peculiar formations. Specimens of the fossil shells and corals of the islands were obtained in large number and about 60 photographs made, illustrating various geographic features but more especially the variations in elevation and subsidence of the islands. The Alaska-Yukon-Pacific Exposition at Seattle was visited near its close by the Curator and a considerable quantity of valuable material illustrative of the ores and minerals of Alaska and the Pacific Northwest obtained from exhibitors there. Among the material obtained was a number of pay gravels from placer mines of Alaska, low grade gold ores of Alaska, copper ores, including those of native copper, from the Copper River district, tin and tungsten ores from Teller, Alaska, showing associations like those of the Cornwall region, specimens illustrating the coals of Alaska, including anthracite and natural coke, sulphur and antimony ores from Alaska, representative ores from the mines of

the State of Washington, including ores from the New Republic mine, gold-bearing lead ores from Metaline, nickel, mercury, and antimony ores from Cle Elum, a series of copper ores illustrating transition from carbonate to sulphide from the Glacier Peak district, iron and chromite concentrates from the black sands of Cape Flattery, talc, fire clays and pottery clays and a series of silver-lead ores of the important mines of the Coeur d'Alene district, Idaho. Some choice mineral specimens were also obtained, including a fine group of smoky quartz crystals from Mt. Hood and a specimen of the new mineral hulsite. Some excellent Cretaceous fossils of unique form of preservation and including a new nautiloid species were also obtained. On the same trip the asphalt fossil beds near Los Angeles, California, and the Grand Canyon of Arizona were visited and valuable specimens collected and photographs made. A brief trip to Southern Oklahoma was made by the Assistant Curator from which ores, fossils, and other geological material of the territory were obtained. The ores secured were chiefly of iron and manganese and illustrative of the gradations among these ores and the replacement of limestone by iron. Good specimens of glass sand were also obtained. The fossils obtained were chiefly bryozoa and brachiopods. In addition, specimens of calcareous and siliceous oolites were collected and some field studies made regarding the origin of the latter. The Assistant Curator of Invertebrate Paleontology continued during the year the work of collecting invertebrate fossils in the Chicago area and at Wilmington, Illinois. In the Chicago area over 500 specimens of Niagara age were collected, chiefly crinoids, sponges, and corals. Several of the crinoids furnished additional illustrations of the new species recently described by the Assistant Curator and several new forms were obtained. Several hundred Pleistocene shells were also collected in the area. At Wilmington over 2,000 specimens of Richmond age were obtained, nearly all of which are new to the collections. These include representatives of about 20 species of Brachiopods, several species each of Pelecypods and Cephalopods, and 35 species of Bryozoans.

During January, February and March, Mr. John F. Ferry of the Department of Zoology, visited the islands of Bonaire, Aves, Los Roques, Orchilla, Tortuga, Blanquilla, Los Hermanos, Margarita, and Testigos, situated off the northern coast of South America. His collections number 824 birds, 27 birds' eggs, 19 mammals; and in addition small collections of fishes, reptiles, and invertebrates were made. As a result, 8 species and subspecies of birds new to science were discovered and a large number of species new to the collections



Tonopah (Nevada) Meteorite. Weight 3,275 lbs.

of the Museum were obtained. In addition much information of value in the study of migration, variation, and geographic distribution was secured. In May, June, and July Mr. Ferry again took the field and worked in the vicinity of Prince Albert and Quill Lake, Saskatchewan, where he secured 195 birds, 22 mammals, 36 sets of birds' eggs with nests, and a large amount of accessory material for the preparation of exhibition groups of the water birds which breed in this region. Later a second expedition to the same locality was undertaken by Mr. Ferry, accompanied by Mr. L. L. Pray, to procure a series of pelicans and additional accessory material, which proved successful. In the early part of December, Mr. C. A. Corwin, Artist, and Mr. L. L. Pray, Taxidermist, spent two weeks in northern Louisiana, securing sketches and accessories for bird groups in course of preparation. During March, April, and May, Assistant Curator Meek and Mr. Heim visited Key West and Dry Tortugas, Florida, for the purpose of collecting fishes and accessory material for fish groups, as well as making studies for the same. On this expedition 1,300 alcoholic specimens together with 400 fish skins were secured, representing 50 species. There was also collected a large quantity of ferns, sea feathers, sponges, corals, starfish, sea urchins and other material for accessory work. Of the 400 fish skins about 100 were preserved in brine, 175 are mounted but not finished, and 25 are mounted, ready for exhibition. Over 1,500 entomological specimens were collected by the Assistant Curator of the division on a trip made in the late summer to the southern part of Illinois. Among the insects obtained were a number of interesting species which are not found in the northern section of the State, where most of the field work has been done in the past. As a result of a trip made by Mr. Freisser to Northern Mexico, over 200 very desirable insects were obtained from that section.

Following is a list of the expeditions since the date of the last Report:

Locality.	Collector.	Material.
Key West and Tortugas.	S. E. Meek,	Fishes for groups and study material.
Margarita Islands and various other islands off north coast South America	J. F. Ferry,	Birds and mammals.
Saskatchewan	J. F. Ferry,	Birds, birds' eggs, nests, etc., for groups.
Jamaica	B. E. Dahlgren,	Tropical fruits.
Piji — German New Guinea (Huon Gulf)	A. B. Lewis,	General Ethnological collections.

Locality.	Collector.	Material.
West Virginia and Northern Georgia	H. H. Smith,	Timbers.
Starved Rock, Illinois	J. M. Greenman,	Herbarium specimens.
Bermuda Islands	U. C. Farrington,	Geological specimens.
Luzon, P. I.	S. C. Simms,	Collections among Igorot tribes of northern Luzon.
Mindoro, P. I.	F. C. Cole,	Collections and investigations among Mangyans.
China and Tibet	B. Laufer,	General collection of Ethnology and investigations.
Mexico	G. A. Dorsey,	Reconnaissance of certain ruins in Chiapas.
Oklahoma	H. W. Nichols,	Ores.
A. Y. P. Exposition	U. C. Farrington,	Ores and minerals of Pacific Northwest and Alaska.
Saskatchewan	J. P. Ferry,	Birds, including adults and young, birds' eggs and nests for groups and study material.
Lemont and Wilmington, Illinois	A. W. Slocum,	Invertebrate fossils.
Southern Illinois	W. J. Gerhard,	Insects, etc.
Luzon, P. I.	Wm. Jones,	Investigations and collections among the Ilongots, province Isabela.
Texas	R. A. Dixon,	Herbarium specimens.

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT.—The ethnological material secured by Mr. Cole in Northwestern Luzon during the second Robert F. Cummings' Philippine Expedition, chiefly among the Tinguian, Apayao, and Kalinga tribes, has been installed in new cases entirely, filling Hall 41 and partially filling Hall 57, with the exception of two ■■■■. Hall 41 is entirely occupied with material from the Tinguian tribe. This comprehensive exhibit consists of basketry, matting, a case fully illustrating the manufacture of textiles, blanketry, women's costumes, men's dress and accessories, medicine and foods, toys and musical instruments, fishing paraphernalia. Two Tinguian groups are about completed for Hall 41. A life-size forge group of five figures, illustrates the manufacture of head axes and spears. A miniature village group, built to scale by Dumagat, a native boy, consists of house models, rice granary, balaua, spirit houses, rice seed-beds, and accompanying accessories. About thirty figures of the natives at their daily tasks will lend added interest to this case. Two cases of Kalinga-Tinguian-Igorot material from the Saltan River Valley and from the Tinguian-

Apayao-Kalinga people of the Tineg River Valley complete the quota of 21 cases filling this Hall. In Hall 57 are already installed two additional cases of Kalinga-Tinguian-Igorot ethnological specimens from the Saltan River Valley; two cases of Kalinga material, one case each of Batak and Tagbanua ethnological material from Palawan. Over 200 photographs, along with new maps, have been placed in these cases to further illustrate the use of objects shown. In this Hall there yet remain to be installed two cases of Batak material and three of Apayao, for which cases are still lacking. 17 New Guinea house posts have been placed in the coves of Hall 58. In Hall 53 two cases of ethnological specimens, comprising basketry, weapons, house posts, drums, carved figures, a wooden bed, shell money, etc., from New Ireland and close-by islands, have been temporarily installed. This material, except a small quantity from the Parkinson collection, was gathered by the Curator of the Department during his hurried trip around the world in 1908. From the hall ceiling were suspended boats, outrigger canoes, from the Solomon Islands, New Guinea and New Britain, and a surf raft from the Solomon Islands. Upon the east and west walls were fastened ceremonial house carvings from New Guinea, a portion of the Voogdt collection, presented by Mr. Joseph N. Field. Here also have been installed two dance masks, the larger over 16 feet in height, from Hansa Bay, German New Guinea. These masks are rare since they are usually destroyed after having served the temporary purpose for which they were made. In Hall 37 has been installed a case of material from Sumatra and one from Java, consisting of material collected by the Curator during his recent visit to these islands. A case of Java ethnology stands in Hall 39 and two cases of the same material yet remain to be installed upon the arrival of the consignment of new cases. Here also is a case of Apache-Yuma and Havasupai ethnology. In the south cove of Hall 38 have been placed temporarily four Philippine spirit houses collected by Mr. Cole on the second R. F. Cummings' Expedition. On the wall of the cove are four large rice planters from the Island of Cuyo. In the center of the Hall stand temporarily three cases of Apache material, consisting of two of Medicine Dance paraphernalia, and one case of painted buckskins, implements of the chase, various household utensils, tools used in tanning, etc. Some confusion of installation exists in Halls 37, 38, and 39, leading to the east annex, owing to the temporary use of Hall 7 by Zoölogy. As soon as it is released to Anthropology this condition will be improved by the installation of the collections originally designed for this hall. In Hall

6 were installed six cases of Apache material, comprising objects of personal adornment, accessories to dress, children's playthings, medicine, foods, games, awl cases, musical instruments, grinding implements, transportation, basketry, and warfare. Three cases will be required to complete the installation of the Apache material. In the south end of the Hall have been installed the Navaho exhibits, largely the gift of Mr. Ayer, and consisting chiefly of blankets and a splendid lot of old Navaho basketry. A case of old Tlingit armor has been installed in Alcove 111. Owing to the crowded condition of the Egyptian Hall, the installation there of the sarcophagus and large false doorway, recently secured by Mr. Ayer, made considerable rearrangement necessary. Case 41, Alcove 123, has been rearranged. In Hall 40 a rearrangement of five cases was rendered necessary through the addition of certain material procured by Mr. Cole in Northern Luzon. The cases of the North Court have been felted anew and provided with suitable screws, rendering them more nearly dust proof than before.

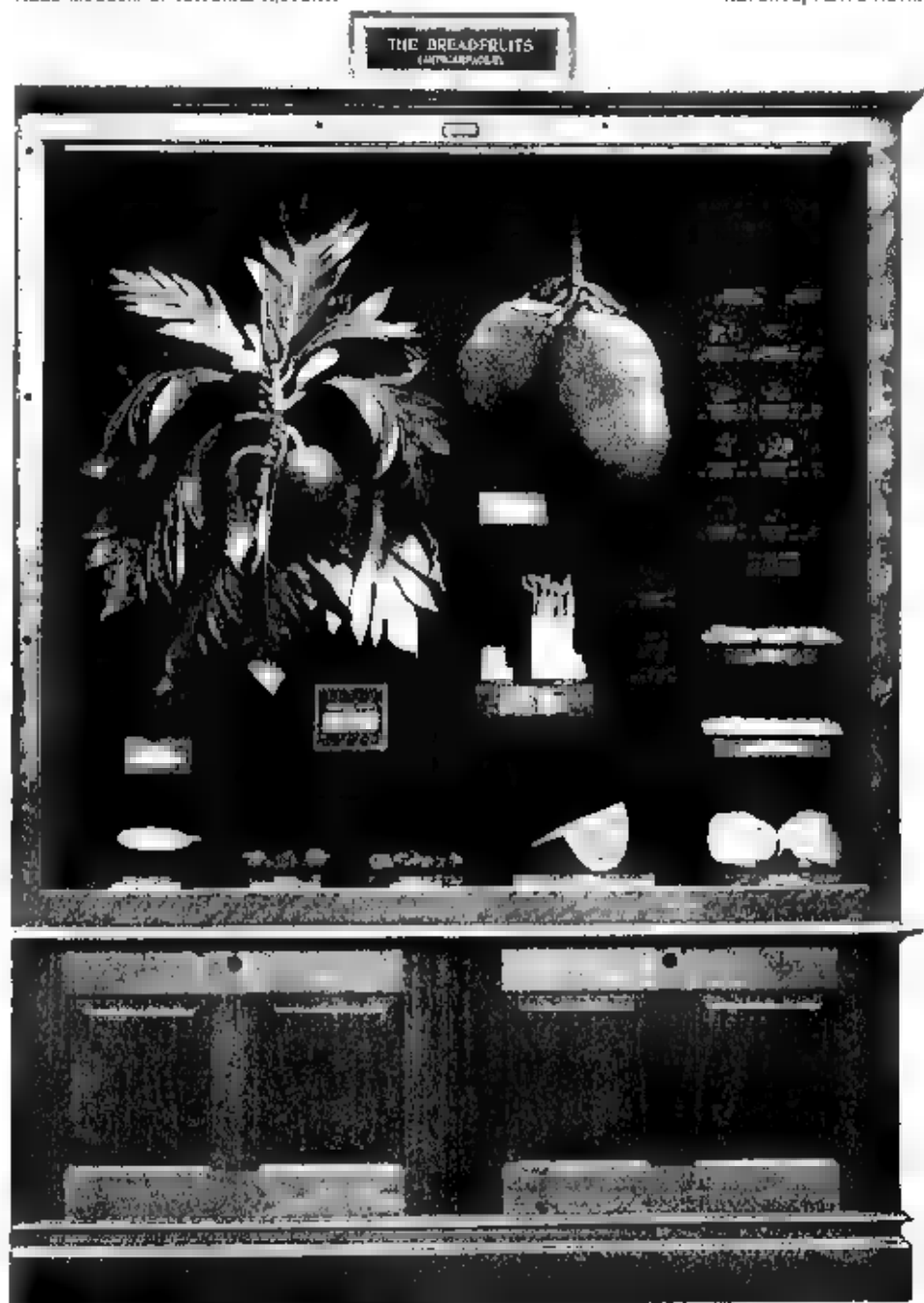
The economic botanical collections have received the addition of 215 specimens of more than ordinary interest. The progress of installation in the Department of Botany has far exceeded that of any previous year. The entire west galleries have been completed through the installation of 40 cases, and 42 have been completely labeled. The large and valuable dendrologic series from Paraguay has been resawed, redressed, and installed with bark and wood in approximation, in 7 highly interesting cases; the 39 principal woods of the Island of Trinidad occupy a half case brilliant and attractive in color, these with 41 species of woods from British Guiana, complete the case; another case sets forth 70 species of Colombian woods; another, 161 species of the woods of Venezuela, the latter a very complete and carefully identified series. The dendrologic collections end with two cases of more than ordinary interest; one of these contains an enlarged model showing the structure of wood; the other a long series of specimens illustrating the manner and results of government timber tests. The unique and highly attractive display of woods in the Department now comprises 45 complete cases fully and descriptively labeled. To the systematic display in economic botany, 29 cases have been added during the year; one of these illustrates the plants of the Bible, the labels presenting relative quotations concerning each; another is devoted to tea in its various forms, types, and characters; another contains ■ small families of plants, the snakeroots, poke weeds, sandal-woods, waterlilies, buttercups, pinks and bear-

berries; and another the pines, cedars, and fir. A case illustrates the wood chip industry of Japan together with a long series of interesting and comparative coniferous fruits from the Orient, Australia, and the tropics. A case of Coontie starch plants with their interesting cone-like flowers and fruits; and the cattail flags and objects of their utilization. An additional case in the grass family shows the utilization of grass fibres in cordage and basketry, and the roots in dyeing. Two and a half further cases, illustrating the palms, bring the representation of this utilitarian family up to 14. An additional of the oaks, walnuts, and birches has been added, and another to the representation of the mulberry family, containing the interesting tapa cloth, letter-wood, luscic, and other products. A highly interesting case of the breadfruit family with its rubber gum, nuts, and meal. A case illustrating the magnolia, custard apple, witch-hazel and sycamore families with their instructive fruits, woods, and other products. Four cases in the bean family have been added to the four previously on exhibition, the four new ones include the woods, fibres, fruits, seeds, gums, and dyeing and tanning barks produced by this valuable family. The mahogany family now occupies a case of high interest as do also the orange family, the spurge family, and the soapworts. The buckthorns and vines yield a highly instructive exhibit of products with the tea family occupying a part of the same case. The gutta-percha family with its rubbers, gums, and resins, and the passion flowers and lace-barks completes another installation. The cacti, pomegranates, and mangroves fill another case, and the interesting and curious monkey-pot family with that of the clove and allspice another. The family of the parsleys yielding many odorous fruits such as the cumin, angelica, caraway, and the ill-smelling gums asafoetida and angelica, is now well represented. The black gum, azalca, dogwood, and ebony families, producing many valuable products, and the sapodilla family, of chewing gum notoriety are fully exploited. The morning glory family, with the milkweeds, complete another interesting case; the mint family, and that of the sesames, another. The madder family with its coffee, dyes, and tans, and the potato family with many common food examples, complete the economic installation of the year. The plans of the Curator of Botany have been, from the first, to combine both taxonomic and economic characteristics in the cases devoted to systematic botanical installation. Up to the present year the absence of a capable reproductionist upon the staff of the department has necessitated installation of economic material only; now, how-

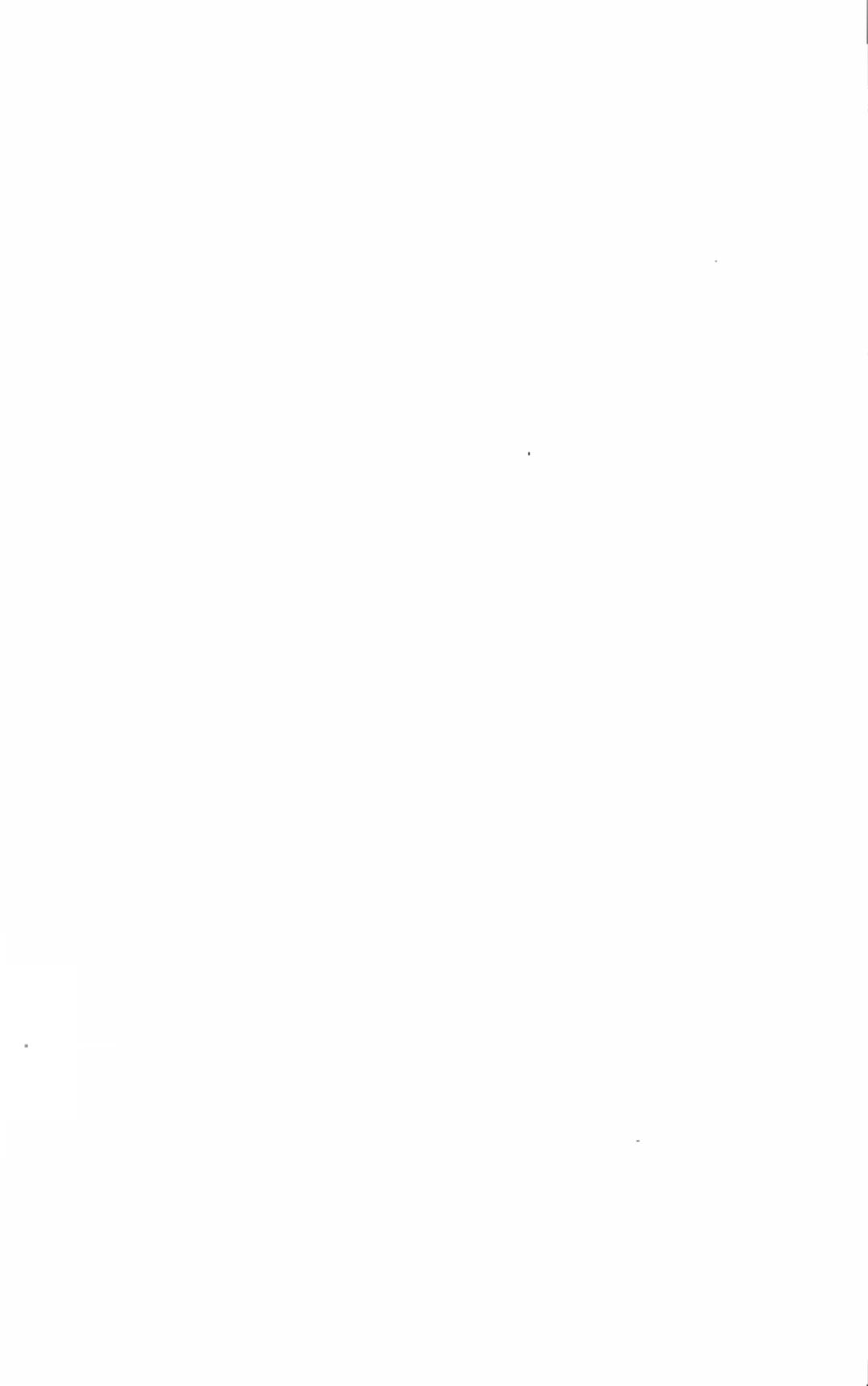
ever, a Modeler's section has been equipped and placed in charge of Dr. B. E. Dahlgren, a capable scientific artist, and the results of his work in reproduction are finding places in the plant families. The case devoted to the breadfruit family, illustrated in this Report, clearly indicates the proposed plan of installation. In this case the material illustrates the family characters and products as follows: A life-size reproduction of the end of a leafy, flowering, and fruiting branch of the breadfruit (*Artocarpus incisa*) shows the leaf-form and characters; the disposition and characteristics of the flowers, and the immature and mature fruit in exact relation; with this are two enlargements from nature exemplifying the intimate structure and character of the flowers, both male and female, the more delicate features of which are reproduced in glass to insure stability and permanence in the reproductions; in close association is a natural sized ripe fruit, shown in section, to illustrate both the developed ovary and the peculiarities of the fruit itself. These four reproductions together exemplify all the botanical characters that distinguish the family and unite its genera and species in intimate relationship. Another similar installation has been completed illustrating the chocolate family; in this a chocolate tree (*Theobroma cacao*) is represented in full fruit and leaf, an enlarged model depicts the peculiar flower in botanic detail; and a third the ripe fruit with its seeds (chocolate beans) invested in their natural coating of mucilaginous tissue. Several other group models now well under way will add deep and renewed interest to cases already installed with products only. No Museum has ever before attempted such comprehensive educational installation, and the result in interesting the public in plant life is already being felt. A rearrangement of the two easterly herbarium rooms became necessary in order to better arrange the departmental library to accommodate the increase of books obtained through the Rothrock accession. The herbarium cases in the northeast room were removed to the southeastern room to replace the books therein. The entire walls of the former room are now in book shelves the content of which makes a creditable beginning of a botanical library. The subject, author, and species card indices have been kept up to date and the accessibility and utility of the library notably increased. The herbarium work has progressed satisfactorily during the year, though there is still a large part of the Wahstedt, Rothrock, and University of Chicago herbaria awaiting the organization that will render the specimens an integral part of the Museum herbarium.

In Higinbotham Hall the series of gold nuggets and crystallized gold was moved to one of the floor cases and mounted and labeled in accordance with the method employed for the general gem collection. Unlabeled specimens of the gem collection were supplied with labels to the number of about sixty. In Hall 36 the large slab of *Uintacrinus* acquired during the year and shown in Plate LII was placed on exhibition. The preparation of this slab for exhibition involved considerable labor as the slab had been imperfectly mounted when received and was unsafe for exhibition without further treatment. In order to prepare it for exhibition and make a firm and durable mount, the surface designed for exhibition was covered with tissue and a thick covering of plaster poured over it. The slab was then reversed and the plaster previously forming the bed carefully removed from the rear side. A thick bed of plaster was provided for this side and a heavy and durable framework placed around it. The plaster was then removed from the front side and the whole framed in heavy plate glass. In Hall 59 a fine mastodon skull from Yorkville, Illinois, has been installed in place of the large cast of *Elephas ganesa*. Some needful repairs were made upon the mastodon skeleton in the same Hall. A wall case, corresponding in pattern to those already in the Hall, was provided for a series of Tertiary and Quaternary invertebrate fossils, including those collected by the Curator in Bermuda, and the specimens installed in it. Other specimens installed in the Hall include a slab mount of a nearly complete skeleton of the Miocene wolverine *Asturion*, a skull and fore and hind legs of *Moropus elatus*, two skulls of *Diceratherium*, two skulls of *Archæotherium mortoni*, a skull of *Oligobunus*, and a fore leg of *Hypohippus*. In Hall 61 a nearly complete skeleton of *Castoroides* from Indiana was assembled and installed in a wall case. This is a rare form of beaver-like animal of which only one other skeleton and three incomplete skulls have been found, although the first remains were found in this country in 1838. Besides its rarity this skeleton is remarkable for its large size, the animal having been more than two feet in height and five feet in length and having incisors ten inches long. In Hall 62 a large floor case four feet square was provided for the Tonopah meteorite and the meteorite, weighing nearly two tons, installed in it. The case is of the same pattern as the other floor cases in the Hall. Some readjustment of the other floor cases was necessary in order to obtain space for this one, and the time during readjustment was improved to thoroughly paraffin the series of Toluca meteorites, in order to check incipient

decomposition. Some small meteorite specimens were also installed in their proper places in the collection. In Hall 65 a large mahogany ■ 5 feet square by 8 feet high has been provided for an exhibit of selenite crystals from Utah. These are mounted in the form of the geode in which they originally occurred. The case is provided with glass on one side and the interior is lighted with electricity. A large number of crystals are shown in this exhibit, many of them weighing between 50 and 100 pounds each, and the restoration of the conditions under which they were found in nature has been made as realistic ■ possible. A case has also been provided in this Hall for the remarkable fulgurite, 9 feet in length, obtained from Indians, and the specimen installed therein. The remaining collections in the Hall have been completely rearranged and labeled and some new material added, including the specimens of concretions and potholes brought by the Curator from Bermuda. In addition to the exhibits named the Hall ■ now installed contains two cases of cave products, one of ripple marks, mud cracks, etc., a half case of glacial material and a half case illustrating rock weathering, two cases of concretions and one case of septaria. In order to complete the labeling of this Hall temporarily, about 200 written labels were prepared and installed. A similar rearrangement and labeling has been made of the material in the wall cases in Hall 66. A half case is now devoted to rock textures, a half ■ to rock jointing, two cases to volcanic products, ■ half ■ to faults and folds, a half case to dendrites, a half case to oolites, a half case to veins, and ■ half case to products of metamorphism. A considerable quantity of rough building-stone and marble material of various sizes which had been obtained from a number of sources was reduced to uniform size for installation with the regular building-stone and marble collection in Hall 67. Twenty four-inch cubes of limestone, sandstone, granites, and other building stones were added in this way to the building-stone collection and six large polished slabs of granite, diorite, and other eruptive rocks. In addition about 100 specimens of polished marbles smaller than the standard size were grouped by locality or pattern in frames of the standard size of 10 x 15 inches and added to the marble collection. Twenty-five of these frames containing from one to eight specimens each have been installed and thus ■ considerable number of important specimens which it had not been possible to exhibit hitherto was added. About 70 temporary labels written in white ink on black cards were also prepared for this collection and installed. A series of specimens illustrating the manufac-



Combined Taxonomic and Economic Installation. The Botanical Characters Modeled.



ture of Japanese pottery received from Nippon Toki Gomei Kwaisha has been installed in Hall 68. This series exhibits both material and stages of manufacture. Hall 70, devoted to varieties of coal and hydrocarbons, has been completely reinstalled during the year. New cases have been provided throughout and the specimens, with some additions, reinstalled in them. The cases adopted are wall and floor cases of the type already in use in Hall 68, with the exception that the wall cases are deeper. Seven wall cases and six floor cases of these types have been placed in the Hall. Five of the wall cases are devoted to the collection illustrating varieties of coal from lignite to anthracite. Besides the coals of this country those of England, Germany, and Australia are especially well represented. The two additional wall cases are three feet deep and are devoted to large specimens of asphalts, cannel, and other coals, including a complete section, $\frac{1}{2}$ feet in height, of an Australian coal seam. Of the floor cases, one is occupied by diamonds and diamond-bearing earths and rocks from most of the important diamond-bearing regions of the world. Another is devoted to a very complete collection of graphites from various localities and countries. The others contain asphalts, gilsonite, and other hydrocarbons of economic importance as obtained from various localities. A complete collection of rocks associated with the coals of Saarbrücken, Germany, and illustrating in a general way the rocks usually associated with coal occupies another floor case. The total number of specimens now exhibited in the Hall is as follows: 44 American lignites, 9 American cannel, 55 American bituminous coals, 29 English and miscellaneous European coals, 54 German coals, 17 specimens illustrating German coal washing, 12 specimens foreign bituminous coals, 17 specimens anthracite coals, 17 large specimens of French and California asphalts, American anthracites, cannel, etc., 31 specimens diamondiferous rocks and gravels, 50 specimens graphite, 50 specimens of peat and its products, and 63 specimens of asphalts and related hydrocarbons. Hall 72, devoted to ores of the precious metals and lead has also been completely reinstalled during the year. New cases have been provided and a complete reorganization of the collections made. The wall cases are of the type used in Hall 79 with some changes in the felting and hinging. Ten of these wall cases have been provided. On the floor of the Hall fifteen cases have been placed, five of which, placed in the center of the Hall, are devoted to larger specimens. These cases are similar to those used in Hall 79 except that the sides have been made in a single light of glass instead of two lights, and

these lights are removable entire when it is desired to open the case. The other floor cases are of the type already in use in Hall 68. Before reinstallation of the specimens they were carefully cleaned and any essentially duplicate material eliminated. The general plan of installation which had been previously adopted was retained, the ores being placed in geographic order in the wall cases. As before, the ores of a group of mining districts have been placed together and for all such groups an individual label has been prepared. It may be said that most of the important mining districts of the precious metals of the world are represented in this collection. The large specimens on the floor of the Hall are grouped geographically also as far as possible. Specimens too large for these cases were removed to the West Dome. All of the specimens in Hall 72 are now protected by glass, so that much better preservation of them is insured than has been possible hitherto. In addition to the large specimens the floor cases contain a number of special collections, such as those illustrating alloys of gold and silver, salvage of gold and silver waste, and platinum ores from various parts of the world. Three floor cases are also devoted to the metallurgy of the precious metals and lead. In one of these is exhibited an elaborate German method of treating silver and lead ores, the results of the different processes being connected by lines to show the course of treatment. A collection illustrating smelting of silver-lead ores in the ordinary manner occupies another case. In order to make the representation of the process somewhat more graphic, this collection has been provided with a model of a blast furnace. In this model, which was constructed in the Department, the various features of the blast furnace are shown in detail and a portion of the wall of the furnace is represented as removed from the rear so that the interior charge of the furnace may be seen. A model of a cyanide plant for the extraction of gold has also been constructed and placed in one of the floor cases. The model shows five wooden tanks placed upon trestles and filled with representations of the solutions and ores used in the processes. The tanks are connected by pipings shown in the model and a steam pump and zinc box are shown. A summary of the collections at present exhibited in the Hall and their distribution is as follows: One case, synoptic collection, placer gold ores, Canadian ores and Appalachian Mountain ores; one-half case, lead ores of the Mississippi Valley; two and one-half cases, Colorado ores; one case Nevada, Montana, Idaho, South Dakota, Washington, and Utah ores; one case, California and Arizona ores; one-half case, New Mexico ores; ■■■ case, Mex-

ican ores; one-half case, South American ores; one case, Colombian ores; one case, ores of Australia, Africa, and Europe; one case, gold ores of Alaska; one case alloys of precious metals; one case salvage of gold and silver wastes; one case ores of platinum; one case metallurgy of silver-lead ores; one case metallurgy of gold, silver, and lead, illustrated by models; one case large specimens South American ores; one case large specimens Mexican ores; one case large specimens New Mexico and Colorado ores; one case large specimens Colorado ores; and five cases large specimens of typical gold and silver ores from all parts of the world. The relief maps of Leadville, Mt. Blanc, Carmelo Bay, and Mt. Desert exhibited in Halls 76 and 77 were repainted and framed during the year. Some additions were made to the map of Auvergne and one of the large maps of the Henry Mountains was framed. About fifty labels were placed in Hall 78 in number sufficient to complete the labeling of the collections in this Hall and a few additional specimens were installed. In Hall 79 the large mass of manganese ore from Brazil weighing 3,300 pounds, obtained from the St. Louis Exposition, was installed upon a mahoganized base. There was also added to the exhibition series in this Hall the important series of copper ores from Alaska and Washington secured by the Curator at the Seattle Exposition, and a number of mercury, tin, tungsten, antimony, cobalt, nickel, and iron ores from the same source. About 100 hand-written labels were made for the new specimens. The West Dome not proving sufficiently well lighted for the display of small specimens, the four cases of lead ores previously exhibited there were removed and a number of large specimens brought from Hall 71 to take their place. For these as well as for the large specimens already on exhibition in the dome, neat mahoganized bases were provided and the general appearance of this hall much improved thereby. A number of important specimens have during the year been prepared in the laboratory of vertebrate paleontology for exhibition. The largest of these was the mastodon skull with one tusk obtained from Yorkville, Illinois. Although this skull was nearly complete when received, some restoration was found necessary to insure its preservation. The restorations made were based on careful studies of skulls both of ancient and modern elephants. Considerable treatment of the tusk was also found necessary ■ account of its strong tendency to fall apart, and long experimentation was required before a satisfactory mode of preservation was discovered. By imbedding the tusk entire in paraffin, however, and then removing the excess of paraffin, a

satisfactory result ■■■ obtained. As only one tusk was present, another was modeled in plaster and the whole carefully assembled and bolted together. It was then mounted upon a well-constructed base. An excellent specimen of especial local interest has thus been secured. Another important preparation was that of a skeleton of the Miocene camel (*Oxydactylus longipes*) the material for which was collected by the Museum Paleontological Expedition of 1908 in Nebraska. By means of the restoration of a few bones a complete skeleton was obtained. This skeleton stands over six feet in height and exhibits to a striking degree the characters of the camel family. Only one other complete skeleton of the form is known. A nearly complete skeleton of the Miocene wolverine, *Aelurocyon*, was chiseled from its matrix and mounted in slab form. Two skulls of *Archotherium*, one of which was collected in South Dakota in 1898 and the other in Nebraska in 1908, were also cleaned from matrix and mounted. These skulls were unusually well preserved and one may be a new species. A fore leg of *Hypohippus* obtained in Nebraska in 1908 and illustrating an interesting stage in the evolution of the horse was mounted. Two skulls of the two-horned rhinoceros or *Diceratherium* from Nebraska, a skull of *Oligobunus* from the same locality and a skull and fore and hind legs of the remarkable form *Moropus* were also prepared and mounted. Two cases of storage trays were provided in addition to those already employed for storage of vertebrate fossils and were nearly filled with cleaned and identified specimens. A similar case of trays has also been provided for the invertebrate fossils which will be used for specimens awaiting identification, before their removal to the exhibition or the study series. Considerable progress has been made in organizing the study collection of ores and other economic minerals, a large part of the specimens having been cleaned, wrapped, labeled, and distributed. To the Department photograph albums 179 prints have been added during the year, making the total number 2,372. Books, pamphlets, and maps to the number of 492 have been added to the Department library, making the total number in the library 6,042, and ■■■ binding and repairing of books and rearrangement of shelf series in this connection has been performed.

The Department of Zoölogy installed during the year a striking pair of African elephants in the central rotunda of the Museum. Aside from this, no large groups have been completed though several important studies both of mammals and of birds ■■■ well under way



Group of African Elephant (*Elephas africanus* poeli. Lydekker).

and will doubtless be installed during the year. A habitat group of antelopes (*Antilocapra americana*) has been begun and in November Mr. Julius Friesser visited northern Mexico securing the necessary accessory material. Owing to the generosity of Mr. Stanley Field, who provided the necessary funds, four large habitat groups of birds have been begun and bid fair to excel any work of the kind which has been undertaken. These groups will show the following North American species under natural conditions: 1, California condors (scene, mountains of Southern California); 2, wild turkeys (scene, forest of Northern Louisiana); 3, white pelicans, cormorants, gulls, etc. (scene, breeding grounds, Quill Lake, Saskatchewan region, Canada); 4, wild geese, ducks, terns, etc. (scene, breeding grounds, vicinity of Prince Albert, Saskatchewan, Canada). In this connection the services of Mr. C. A. Corwin have been secured to prepare the painted backgrounds. Ten large mammals have been added to the systematic series of mounted mammals during the year. These include 2 glacier bears, 1 Stone's caribou, 1 mountain goat, 2 Alaska wolves, 1 wolverene, and 2 Alaska lynx. About 80 small and medium-sized birds have been finished and placed on exhibition. A collection of photographs of living animals intended especially for use of the taxidermists has been begun and proves most valuable. One fish case containing 4 groups of fresh-water fishes and 36 jars of fishes in formaldehyde have been installed. One python has been mounted, and a large alligator has been installed in the exhibition rooms. In progress of preparation is a case 6 x 12 feet to contain 6 groups of tropical fishes, each group with a glass front 3 x 6 feet; below these groups, occupying the entire floor of the case, is being installed a group consisting of a large tiger shark and her 44 young. Much attention has been given during the past year to the collection of local insects, with a view to installing an exhibition collection representing the insect fauna of the State. For several years it has not been possible to prepare the specimens as rapidly as they were received, with the result that a large amount of material has accumulated which has not been pinned. It was to the preparation of these insects that more time was devoted than to any other work, by the Assistant Curator. Owing to facilities for degreasing skulls and skeletons, which were secured through the courtesy of Mr. William Warwick, Superintendent of the Standard Oil Company plant at Whiting, Indiana, who placed a building at the disposal of the Museum for that purpose, 43 skeletons and skulls were degreased.

In the Museum laboratory the following specimens were prepared:

Skulls cleaned for the Division of Mammalogy	753
Skeletons repaired and remounted	8
Skulls mounted for Craniology	17
Skeletons mounted for Osteological collection	8
Total	786

PRINTING.— It will be noticed that a large number of labels have been printed during the year. The office is now well equipped, its facilities enlarged, and the number of employees increased. The following figures show the number of impressions in the way of label printing and other impressions:

	Labels.	Other Impressions.
Department of Anthropology	3,724	5,250
Department of Botany	6,081	19,630
Department of Geology	271	255
Department of Zoology	391	29,025
Director's Office . . . . .	..	75,005
Higinbotham Hall	62	..

PHOTOGRAPHY AND ILLUSTRATION.— Unusual activity marked the progress in this important division. 875 negatives, made in the field, were developed; over 1,200 lantern slides, and 84 Lumiere Autochrome photographs. The following is a statement of the work performed:

	Negatives.	Prints.	Lantern Slides.	Enlargements.	Lumiere Auto-chroma.	Negatives for Field Expedition.
Director's Office	24	281	..	..	..	..
Department of Anthropology	1,807	5,000	772	..	..	6
Department of Botany	28	834	..	25	4	282
Department of Geology	83	208	166	..	65	214
Department of Zoology	■	288	249	28	15	473
General . . . . .	..	97	..	..	..	..
Gift . . . . .	..	118	60	..	..	..
Sale . . . . .	..	91	20	..	..	..
Totals	2,142	6,917	1,273	53	84	875

Total number of inventory entries to December 31, 1909	80,762
Entries from December 31, 1908, to December 31, 1909	11,344

ATTENDANCE.—The attendance for the year shows a slight decrease over the previous year. The following is the list of school classes (thirty pupils or more) that visited the Museum during the year:

Schools and Location.	Teachers.	Pupils.
University High — Fifty-ninth Street and Monroe Avenue	2	31
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	45
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	35
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	55
University Elementary — Fifty-ninth Street and Monroe Avenue	3	75
Forest Park — Forest Park, Illinois	2	47
Parkside — Seventieth Street and East End Avenue	1	36
University Elementary — Fifty-ninth Street and Monroe Avenue	2	30
Oglesby — Seventy-ninth Street and Emerald Avenue	2	32
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	43
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	45
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	52
Parkside — Seventieth Street and East End Avenue	2	34
Parkside — Seventieth Street and East End Avenue	1	36
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	42
Joliet Township — Joliet, Illinois	2	92
Blue Island — Blue Island, Illinois	2	55
Burke — Fifty-second Street and Prairie Avenue	3	38
South Harlem — Harlem, Illinois	2	35
James Shields — South Rockwell, ■■■ West Forty-third	1	31
Englewood High — West Sixty-second Street and Stewart Avenue	1	169
Prescott — Wrightwood Avenue and North Ashland Avenue	1	30
Harrison — Twenty-third Place and Wentworth Avenue	3	31
University Elementary — Fifty-ninth Street and Monroe Avenue	1	45
University of Chicago — Chicago, Illinois		30
James Shields — South Rockwell, corner West Forty-third	1	44
Harvey — Harvey, Illinois	1	30
Frances E. Willard — Forty-ninth Street and St. Lawrence Avenue	1	31
Gladstone — Robey Street, corner Washburne Avenue	1	37
Blue Island — Blue Island, Illinois	4	149
Hyde Park High — Fifty-seventh Street and Kimbark Avenue	1	109
Kershaw — Union Avenue and Sixty-fourth Street	1	45
Frances E. Willard — Forty-ninth Street and St. Lawrence Avenue	2	36
Earle — Sixty-first Street and Hermitage Avenue	2	44
Raymond — Thirty-sixth Place and Wabash Avenue	3	60
Blue Island — Blue Island, Illinois	2	64
Kenwood — Lake Avenue and Fiftieth Street	2	45
Blue Island — Blue Island, Illinois	6	35

Schools and Location.	Teachers.	Pupils.
Prescott — Wrightwood Avenue and North Ashland Avenue	2	52
James Shields — South Rockwell, corner West Forty-third	1	50
Mark Sheridan — Twenty-seventh Street and Wallace Street	1	68
James Shields — South Rockwell, corner West Forty-third	1	47
James Shields — South Rockwell, corner West Forty-third	1	30
St. Vincent — Webster Avenue, corner Sheffield Avenue	2	30
Seward — Forty-sixth Street and Hermitage Avenue	2	38
John C. Conoley — Leavitt Street and Belle Plaine Avenue	1	33
William Penn — Sixteenth Street and Avers Avenue	2	148
Bowen High — Eighty-ninth Street and Manistee Avenue	1	39
University of Chicago — Chicago, Illinois	2	104
Pullman — One Hundred and Thirteenth Street and Morse Avenue	1	39
Barnard — One Hundred and Fourth Street, corner Charles Avenue	1	30
Altgeld — Seventy-first and Loomis Streets	3	42
McCormick Vacation — West Twenty-seventh Street, corner Sawyer Avenue	10	563
University of Chicago — Chicago, Illinois		36
University of Chicago — Chicago, Illinois		51
University of Chicago — Chicago, Illinois		30
University of Chicago — Chicago, Illinois		45
St. Ignatius — 411 West Twelfth Street		32
Raymond — Thirty-sixth Place and Wabash Avenue	2	80
James Wadsworth — Sixty-fourth Street and Greenwood Avenue		95
Forest Park — Forest Park, Illinois	4	67
James Wadsworth — Sixty-fourth Street and Greenwood Avenue		46
Wendell Phillips High — Thirty-ninth Street and Prairie Avenue	1	37
Bismarck — Central Park, corner Armitage Avenue	2	81
James Wadsworth — Sixty-fourth Street and Greenwood Avenue		37
James Wadsworth — Sixty-fourth Street and Greenwood Avenue		44
Thornton Township High — Harvey, Illinois	1	72
Jewish Training — 554 West Twelfth Place	2	35
Walter Scott — Sixty-fourth Street and Washington Avenue	2	43
Oakland — Fortieth Street, between Langley and Cottage Grove Avenues		43
Larnie — Evanston, Illinois	1	31
Jewish Training — 554 West Twelfth Place	3	32
Oak Park High — Oak Park, Illinois		35

Herewith are also submitted financial statements, list of accessions, names of members, etc.

FREDERICK J. V. SKIFF,
Director.

FINANCIAL STATEMENT.

GENERAL ACCOUNT.

RECEIPTS AND DISBURSEMENTS

From January 1, 1909, to December 31, 1909.

RECEIPTS

Cash in Treasurer's hands, December 31, 1908		847,448.32
Petty Cash on hand, December 31, 1908		710.95
Dues of Annual Members		1,540.00
Admissions and Check Rooms		5,714.50
Sales of Guides		350.23
South Park Commissioners		15,000.00
Interest on Investments		45,289.28
Field Endowment Income		172,150.89
Interest on Daily Balances		1,060.47
Sundry Receipts and Refunds		2,385.09
Sundry Sales		239.16
R. F. Cummings' Philippine Fund		4,773.07
Joseph N. Field South Pacific Islands Fund		70,000.00
Stanley Field Ornithology Fund		1,000.00
Huntington W. Jackson Fund		40.00
Special Donations —		
Richard T. Crane, Jr.	\$ 693.75	
George F. Porter	693.75	
Cyrus H. McCormick	693.75	
Stanley Field	1,193.75	
Sundry	250.00	3,525.00
Marshall Field Endowment Sinking Fund		1,000.00
New Building Moving and Furnishing Fund In- come		1,300.00
		<u>\$312,934.98</u>

DISBURSEMENTS		
Salaries		\$82,033.74
Guard Service		12,796.32
Janitor Service		8,557.82
Fire Protection		2,945.18
Heat and Light —		
Wages	\$3,666.00	
Fuel	7,162.50	
Supplies, gas, etc.	<u>1,304.41</u>	12,132.91
Repairs and Alterations —		
Wages of Carpenters, Painters, Roofers, etc.	\$11,542.46	
Material used — paints, oils, glass, lumber, plaster, etc.	<u>1,346.16</u>	12,888.62
Furniture and Fixtures		4,334.03
The Library —		
Books and Periodicals	\$1,581.15	
Binding	704.12	
Sundries	<u>71.56</u>	2,356.83
Sections of Printing and Photography		2,171.18
Collections, etc., Purchased		29,644.21
Departmental Expense		6,442.00
Expeditions		7,214.77
Publications		7,881.55
General Expense Account —		
Freight, Expressage and Teaming	\$4,022.52	
Stationery, Postage, Telephone, etc.	988.03	
Northern Trust Company, Custodian fee	564.05	
Sundries	<u>1,495.84</u>	7,071.44
Mrs. Timothy B. Blackstone Fund		15,000.00
R. F. Cummings' Philippine Fund		5,196.93
Stanley Field Ornithology Fund		<u>967.60</u>
		\$219,636.03
In Treasurer's hands December 31, 1909	865,014.41	
Petty Cash on hand	710.05	
New Building Moving and Furnishing Fund Investment	<u>25,621.53</u>	
Marshall Field Endowment Sinking Fund Investment	<u>1,023.06</u>	93,298.95
		<u>\$312,934.98</u>

**ATTENDANCE AND RECEIPTS FROM JANUARY 1, 1909 TO
DECEMBER 31, 1909.**

ATTENDANCE.		
Paid Attendance		
Adults	20,160	
Children	1,210	21,370
Free Admission on Pay Days		
School Children	5,318	
Students	3,524	
Teachers	477	
Members: Corporate	77	
Annual	76	
Life	?	
Officers' Families	144	
Special	146	
Press	2	9,771
Admission on Free Days		
Saturdays	38,400	
Sundays	130,530	178,930
Total Attendance		209,170
Highest Attendance on any day (July 25, 1909)		6,941
Highest Paid Attendance on any day (September 6, 1909)		540
Average Daily Attendance (365 days)		573
Average Paid Admissions (259 days)		82

RECEIPTS.	
Guides sold — 1,437 at 25 cents each	\$359.25
Articles Checked — 11,176 at 5 cents each	558.80
Admissions	5,160.70
	<hr/> \$6,078.75

ACCESSIONS.

DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AYER, E. E., Chicago.

Clay mold from Cat's-eye — Egypt.

2 carved wooden images — New Ireland. (Collected by G. A. Dorsey.)

Facsimile of the Papyrus of Ani, in the British Museum.

CUMMINGS, R. P., Philippine Expedition.

Skulls of Igorot, Tinguian, Ilocanos — Luzon Island. (Collected by P. C. Cole.)

1 Bagobo skull (purchased from Miss Laura E. W. Benedict).

115 ethnological specimens, 48 objects from burial ~~monuments~~ of Pokanin — Mindoro, Philippine Islands (purchased from Dr. Fletcher Gardner).

DORSEY, GEO. A., Chicago.

1 Ifugao skull.

DUPEE, WALTER HAMLIN, Chicago.

Rectangular woven garment, probably kilt, ornamented with tufts of human hair — Lower California.

FERRY, J. F., Chicago.

Flat carrying basket — Margarita Island.

FIELD, JOSEPH N., Manchester, England. South Pacific Islands' Fund.

1,000 ethnological specimens from Central Coast, carved posts, etc. general ethnological collection, ~~specimens~~ etc. — New Guinea (purchased from Captain H. Voogdt).

500 ethnological specimens from Huon Gulf. (purchased from Captain H. Voogdt).

FIELD MUSEUM OF NATURAL HISTORY.

Collected by Edward E. Ayer and Geo. A. Dorsey:

Mastaba tomb from Necropolis of Sakkara — Egypt.

Granite sarcophagus — Egypt.

Collected by A. B. Lewis:

95 ethnological specimens — Berlin Hafen, New Guinea.

Purchases:

Ethnological specimens from Angola, West Central Africa, mostly from the interior from the district of Bihe, and used by the tribe known as the Ovimbundu.

Ethnological specimens — Ceylon.

29 pieces of Kabyle jewelry — Algiers, Africa.

11 Roman seals — Algiers, Africa.

2 Skokomish baskets — Washington.

38 models of Igorot figures, to be used in group work of Northern Luzon, Philippine Islands.

MCCORMICK, STANLEY, Chicago.

6 oil paintings of participants in the famous Hopi Snake Dance — Arizona. (Painted by E. A. Burbank).

■ oil paintings of children in ceremonial costumes — Arizona. (Painted by E. A. Burbank).

RYERSON, MARTIN A., Chicago.

Mastaba tomb from Necropolis of Sakkara — Egypt.

VOOGDT, CAPTAIN H., Freidrich-Wilhelms Hafen, New Guinea.

1 stone image — Huon Gulf, New Guinea.

DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AIKEN, W. H., Cincinnati, Ohio.

1 herbarium specimen — Oklahoma.

AKERMAN, ALFRED, Athens, Georgia.

1 herbarium specimen — Georgia.

BERNICE PAUAIHI BISHOP MUSEUM, Honolulu, H. I.

4 economic specimens — Hawaii.

BIRUM, ELI W., Saratoga, Indiana.

■ economic specimens ■ follows:

1 five pound can sorghum molasses, 3 complete sorghum plants, sorghum canes, extracted canes, 4 fruiting heads — Indiana.

BOTANIC GARDENS, Sydney, Australia.

109 herbarium specimens — Australia (exchange).

1 herbarium specimen — Tasmania (exchange).

103 herbarium specimens — Australia (exchange).

101 herbarium specimens — New South Wales, Australia (exchange).

BRANDEGEE, T. S., Berkeley, California.

5 herbarium specimens — Mexico.

CALKINS, W. W., Berwyn, Illinois.

1 herbarium specimen — Illinois.

CHAMBERLAIN, C. J., Chicago.

4 herbarium specimens — Mexico.

2 fruits in alcohol — Mexico.

CLARK, H. W., Chicago.

■ *Toxylon pomiferum* fruit — Illinois.

CONZATTI CASSIANO, Oaxaca de Juarez, Mexico.

185 herbarium specimens — Mexico.

COULTER, J. M., Chicago.

1 herbarium specimen — Michigan.

CUSICK, WM. C., Union, Oregon.

9 herbarium specimens — Oregon.

DEAM, C. C., Indianapolis, Indiana.

1 herbarium specimen — Indiana (exchange).

- 16 herbarium specimens — Guatemala.
- 39 herbarium specimens — Florida (exchange).
- DESERT LABORATORY, Tucson, Arizona.
- 2 economic specimens fruits and gum — Arizona.

DIXON, R. A., Chicago.

- 1 herbarium specimen — Grass Lake, Illinois.
- 23 herbarium specimens — Vermont.
- 5 herbarium specimens — Montana.
- 186 herbarium specimens — Illinois.
- 24 herbarium specimens — Utah.

FIELD MUSEUM OF NATURAL HISTORY.

Collated by J. M. Greenman:

- 13 plates.
- 2 photographs.
- 2 plant descriptions.
- 1 photograph of type specimen.

Collated by C. F. Millspaugh:

- 138 herbarium specimens — Bahamas, Cuba, and Jamaica.
- 1 photograph of type specimen.
- 4 economic specimens — Kentucky, British India, West Indies and Peru.
- 3 economic specimens — Jamaica.
- 1 tracing.
- 7 herbarium specimens.
- 32 economic specimens.
- 3 economic specimens — California.
- 1 straw specimen.
- 11 economic specimens — California and Illinois.
- 11 economic specimens — Spain and Ceylon.

Collected by B. E. Dahlgren:

- 118 economic specimens — Jamaica.

Collected by R. A. Dixon:

- 760 herbarium specimens — Texas.

Collected by J. M. Greenman, O. E. Lansing, Jr., and R. A. Dixon:

- 1,453 herbarium specimens — Illinois.

Collected by C. M. Millspaugh:

- 4 fruit specimens.

Collected by H. H. Smith:

- 36 herbarium specimens — West Virginia.
- 42 board specimens — West Virginia.
- 28 slab specimens — West Virginia.
- 7 wheel specimens — West Virginia.
- 7 economic specimens — West Virginia.
- 2 dry fruit specimens — West Virginia.
- 1 specimen fruits in formalin — West Virginia.
- 1 herbarium specimen — Illinois.
- 479 herbarium specimens — Georgia.
- 112 economic specimens — Georgia.
- 6 specimens dry fruits — Georgia.

- 4 specimens fruits in formalin — Georgia.
- 13 herbarium specimens — West Virginia.
- 7 dry fruits — West Virginia.
- 28 economic specimens — West Virginia.
- 40 winter twigs — West Virginia.
- 101 slab specimens — West Virginia.
- 82 board specimens — West Virginia.
- 29 specimens wheel sections — West Virginia.

Purchases:

- 374 herbarium specimens — various localities.
- 54 herbarium specimens — Tobago, West Indies.
- 155 herbarium specimens — Paraguay.
- 338 herbarium specimens — West Indies.
- The private herbarium and library of Dr. J. T. Rothrock, West Chester, Pennsylvania.
- 61 herbarium specimens — various localities.
- 303 herbarium specimens — Arizona.
- 198 herbarium specimens — Black Hills, South Dakota.
- 4 herbarium specimens — Tobago, West Indies.
- 512 herbarium specimens — Mexico.
- 507 herbarium specimens — various localities.
- 406 herbarium specimens — Guatemala.
- 597 herbarium specimens — Arizona.
- 12 specimens crude drugs.
- 414 herbarium specimens — West Indies.
- 1,150 herbarium specimens — Philippine Islands.
- 28 herbarium specimens — Palestine.
- 15 economic specimens — Palestine.

Modeled by B. E. Dahlgren:

- 11 models of plants — Jamaica.
- 3 models of plants — Indiana.

FULLER, GEORGE D., Chicago.

- 40 herbarium specimens — Alberta, British Columbia.
- 7 herbarium specimens — various localities.

GARRETT, A. O., Salt Lake City, Utah.

- 14 herbarium specimens — Utah.

GATES, FRANK C., Chicago.

- 43 herbarium specimens — various localities (exchange).
- 27 herbarium specimens — Illinois.

GLOYE, MAX C., Michigan City, Indiana.

- 1 specimen Brazilian cedar — Brazil.
- 1 specimen laurel — British Guiana.
- 1 board specimen — Mexico.

GREEN, CHARLES D., Allegheny, Pennsylvania.

- 1 fruit specimen — Norway.

GREENMAN, J. M., Chicago.

- 1 herbarium specimen — Massachusetts.
- 1 herbarium specimens — Indiana.
- 1 herbarium specimens — Utah.

HILL, E. J., Chicago.

77 herbarium specimens — various localities.

HOPE BOTANICAL GARDEN, Kingston, Jamaica.

1 trunk of tree fern — Jamaica.

ISPLY, F. B., Tonkawa, Oklahoma.

124 herbarium specimens — Oklahoma.

KIRKWOOD, J. E., Tucson, Arizona.

90 herbarium specimens — Mexico.

1 herbarium specimen — Arizona.

LANSING, O. E., Jr., Chicago.

1 fungus specimen — Illinois.

LUNELL, J., Leeds, North Dakota.

4 herbarium specimens — North Dakota.

MAC DOUGAL, D. T., Tucson, Arizona.

1 photograph of Juliana — Mexico.

9 economic specimens — Arizona.

2 cactus candy specimens — Tucson, Arizona.

MILLSPAUGH, C. F., Chicago.

17 economic specimens.

1 economic specimens — Japan.

1 economic specimen — Jamaica.

2 economic specimens — Mexico.

1 economic specimen — Curacao.

1 economic specimen — Florida.

1 fruit specimen.

3 herbarium specimens — Pennsylvania.

MISSOURI BOTANICAL GARDEN, St. Louis, Missouri.

1 description of *Callicarpa cinerea*.

MITCHELL, J. C., Chicago.

1 specimen strawberry fruits — Chicago.

MYERS, G. W., Chicago.

3 herbarium specimens — Colorado.

NATAL BOTANIC GARDENS, Berea, Durban, Natal.

105 herbarium specimens — various localities (exchange).

NEW YORK BOTANICAL GARDEN, Bronx Park, New York.

11 economic specimens — Bahamas, Jamaica, and Mexico (exchange).

233 herbarium specimens — Cuba and Bahamas (exchange).

3 economic specimens — Java (exchange).

771 herbarium specimens — Jamaica (exchange).

6 herbarium specimens — Florida (exchange).

151 herbarium specimens — Bermuda (exchange).

551 herbarium specimens — Bahamas (exchange).

4 herbarium specimens — Barbadoes (exchange).

RECHER, S. E., Sparta, Illinois.

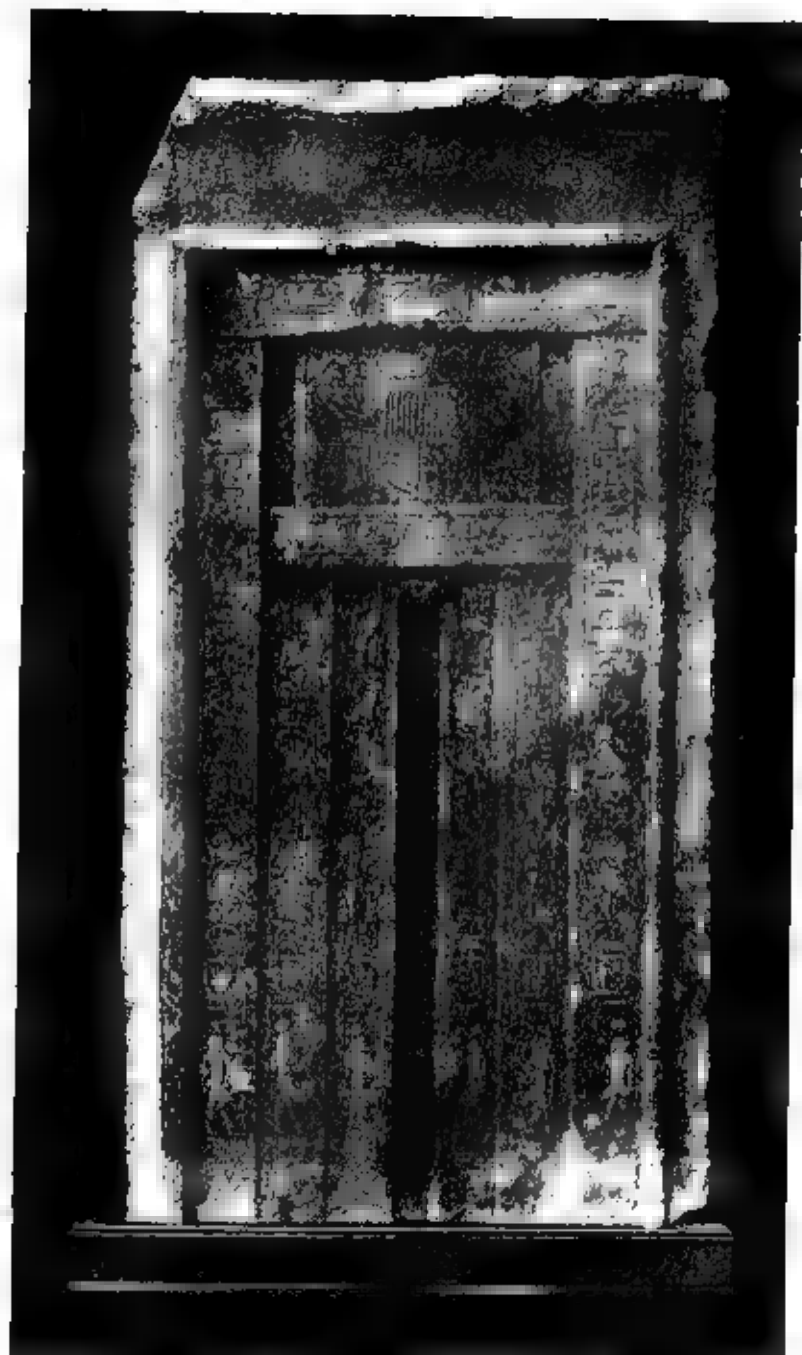
77 herbarium specimens — Illinois.

6 herbarium specimens — Missouri.

REYNOLDS, MISS CARRIE A., Mayfair, Illinois.

4 herbarium specimens — Illinois.

3 herbarium specimens — Illinois.



False Door of Large Mastaba Tomb.



ROTHROCK, J. T., West Chester, Pennsylvania.

- 1 steel engraving of Dr. Asa Gray.
- 1 photograph of John Bartram House.
- 1 photograph of C. S. Bradford.
- 1 photograph of *Quercus Muhlenbergii*.
- 1 photograph of M. Woronin.
- 1 photograph of Andre Michaux.
- 1 photograph of A. de Bary.
- 1 photograph of E. Stahl.
- 394 herbarium specimens — West Indies.

ROWLEE, W. W., Ithaca, New York.

- 1 fruit specimen.

ROYAL GARDENS, Kew, London, England.

- 1 specimen seeds — Niger River (exchange).

RUSBY, H. H., New York City.

- 1 economic specimen — Holland.

SMITH, H. H., Chicago.

- 4 economic specimens — Indiana.
- 2 herbarium specimens — Illinois.
- 1 economic specimens — Indiana.

THE CHINA TEA ASSOCIATION, London, England.

- 18 samples of English breakfast teas — Hankow, China.

THE JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J.

- 12 specimens illustrating steps in the manufacture of lead pencils.

TRELEASE, WM., St. Louis, Missouri.

- 1 herbarium specimen — Mexico.

UNITED STATES BUREAU OF PLANT INDUSTRY, Washington, D. C.

- 1 specimen macaroni wheat — South Dakota.

UNIVERSITY OF CALIFORNIA, Berkeley, California.

- 173 herbarium specimens — Arizona (exchange).

UNIVERSITY OF CHICAGO, Chicago.

- 303 herbarium specimens — Mexico.

WERTER, P. J., Miami, Florida.

- 1 economic specimen — Florida.

WRIGHT, WILBUR H., Chicago.

- 209 herbarium specimens — Illinois, Indiana, and Wisconsin.

DEPARTMENT OF GEOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AUSTRIAN. MRS. JOSEPH, Chicago.

- 321 specimens of minerals, fossils, etc.

AYER, E. E., Chicago.

- 1 specimen asbestos — Ontario.
- 1 glaciated copper boulder, weight 22 lbs. — Lake Geneva, Wisconsin.

BEEBE, J. O., Burlington, Iowa.

- 10 plaster casts of fossil crinoids.

CATLIN, H. W., Oaxaca, Mexico.

- 5 specimens silver — Oaxaca, Mexico.

CHALMERS, THOS. S., Chicago.

3 specimens gold ore — Cripple Creek, Colorado.

CHALMERS, WM. J., Chicago.

1 crystal golden beryl — Poland, Maine.

COX, E. H., Fort Dodge, Iowa.

1 specimen clay concretion — Fort Dodge, Iowa.

DOWD, JOHN, Bristol, Illinois.

1 leg bone of fossil deer — Bristol, Illinois.

FARRINGTON, O. C., Chicago.

2 specimens diamond, in matrix — Brazil (loan).

4 specimens crystallized topaz — New Hampshire (loan).

FIELD, STANLEY; CRANE, R. T., Jr.; McCORMICK, CYRUS H.;

PORTER, GEO. ■.

Tonopah meteorite.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by O. C. Farrington:

150 specimens ores and minerals of Washington, Idaho, and Alaska.

1 specimen volcanic dust — Alaska.

3 specimens trilobites — British Columbia.

■ specimens cretaceous fossils — Washington.

2 specimens fossil wolf — Los Angeles, California.

10 specimens rocks — Arizona and Oregon.

1 glaciated pebble — Homewood, Illinois.

1 specimen pyrrargyrite — Oaxaca, Mexico.

■ specimens silver ore — Oaxaca, Mexico.

3 specimens copper ore — Oaxaca, Mexico.

1 specimen chert — Oaxaca, Mexico.

7 specimens rocks — Bermuda.

3 specimens potholes — Bermuda.

4 specimens concretions — Bermuda.

3 specimens soils and sands — Bermuda.

1 specimen building stone — Bermuda.

119 specimens fossils — Bermuda.

7 specimens fossil shells — Yorkville, Illinois.

Collected by J. F. Ferry:

1 specimen magnesite — Margarita Islands, Venezuela.

Collected by H. W. Nichols:

76 specimens fossils, ores, and minerals — Bromide, Coal Co., Oklahoma.

Collected by A. W. Slocum:

102 specimens invertebrate fossils — Petoskey and Bay View, Michigan.

2174 specimens invertebrate fossils — Wilmington, Illinois.

47 specimens invertebrate fossils — Cook County, Illinois.

1 specimen clay — Cook County, Illinois.

4 concretions — Cook County, Illinois.

10 specimens geodes — Romeo, Illinois.

95 specimens invertebrate fossils — Cook County, Illinois.

- 2 specimens sandstone — Lemont, Illinois.
- 46 specimens invertebrate fossils — Cook County, Illinois.
- 1 specimen bitumen — Thornton, Illinois.
- 350 specimens Pleistocene shells — Willow Springs, Illinois.

Purchases:

- specimen slabs of crinoids — Le Grand, Iowa.
 - 23 specimen crinoids (10 species) — Le Grand, Iowa.
 - 1 slab *Uintacrinus socialis* — Beaver Creek, Logan Co., Kansas.
 - 1 skeleton of fossil beaver (*Castoroides ohioensis*) — Fairmount, Indiana.
 - 1 skull of mastodon with one tusk — Yorkville, Illinois.
- GAMBA, F. PEREIRA, Pasto, U. S. of Colombia.
- 11 specimens gold ores and associated rocks — Porvenir mine, Piedrancha.
- GEOLOGICAL SURVEY OF INDIA, Calcutta, India.
- 1 specimen Dokachi meteorite (exchange).
 - 1 specimen Puttehpoor meteorite (exchange).
- GOFF, JOHN, Pontotoc, Mississippi.
- 45 specimens (2 species) fossil echinoids — Pontotoc, Mississippi.
- GOODALE, FRED, Bristol, Illinois.
- 1 specimen eroded limestone.
- GREBEL, WENDLER & COMPANY, Geneva, Switzerland.
- 1 specimen Buschhof meteorite (exchange).
 - 10 specimens minerals (exchange).
- HOWLAND, LOUIS M., Paris, France.
- 7 specimens fossil sharks' teeth — Cavaillon, France.
- KENKEL, LOUIS V., Harper, Washington.
- 34 views of mines, caves, and rock formations — Montana and Washington.
 - 16 photographs of Alaska glaciers.
- LIEBINGER, FELIX, Vienna, Austria.
- 2 maps of Dolomitic Alps.
- MILLAR, A. Q., Minneapolis, Minn.
- specimens diamond-bearing peridotite — Pike Co., Arkansas.
 - specimens fuller's earth — Pike Co., Arkansas.
- NEWBERRY, W. W., Chicago.
- 5 specimens silicious oolite — Bromide, Oklahoma.
 - 1 concretion — Bromide, Oklahoma.
 - 2 pseudomorphs — Bromide, Oklahoma.
 - 1 piece stalactite — Bromide, Oklahoma.
 - 15 specimens fossils — Bromide, Oklahoma.
- NIPPON TOKI GOMEI KWAISHA, Noritake, Japan.
- 12 specimens clays and other minerals used in the manufacture of Japanese porcelain.
- SLOCOM, A. W., Chicago.
- 1 specimen jasper in hematite — Ishpeming, Michigan.
- TALBERT, JOS. T., Chicago.
- 6 specimens gilsonite — Utah.
 - 1 specimen anthracite — Colorado.

WEBER, JOHN A., Chicago.

1 specimen native copper — Lake Superior.

DEPARTMENT OF ZOOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

ANNIS, N. P., Chicago.

1 fly — Chicago.

BAKER, HENRY D., Hobart, Tasmania.

1 mounted platypus — Tasmania.

BLISS, RAYMOND E., Jr., Chicago.

2 fishes (mounted) — Manitouish Waters, Wisconsin.

COALE, HENRY K., Highland Park, Illinois.

1 mink — Deerfield, Lake County, Illinois.

1 deer mouse — Highland Park, Illinois.

DEUBLER, L., Chicago.

2 flies — Hessville, Indiana.

2 beetles — Hessville, Indiana.

DEWEY, C. L., Chicago.

1 turtle — Dowagiac, Michigan.

DOHMAN, U. A., Chicago.

1 bee — Chicago.

1 beetle-larva — Chicago.

1 bumblebee — Chicago.

DORSEY, GEO. A., Chicago.

1 paradise bird — Solomon Islands.

1 kingfisher — Solomon Islands.

1 jacana — Solomon Islands.

FERRY, J. F., Chicago.

1 bat — Chicago.

1 moth — Porlamar, Margarita.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by C. E. Akeley:

1 millipede — Voi, British East Africa.

3 bugs — Tana River, British East Africa.

2 beetles — Tana River, British East Africa.

Collected by E. B. Chope:

232 dragonflies, grasshoppers, bugs, beetles, flies, moths and bees, wasps, etc. — Illinois and Wisconsin.

874 spiders, dragonflies, grasshoppers, bugs, butterflies, moths, beetles, flies and bees, wasps, etc. — Northern Illinois.

Collected by Geo. A. Dorsey:

1 walking stick — Interior of Bougainville, Solomon Islands.

Collected by J. F. Ferry:

2 snakes — Venezuela, South America.

63 lizards — Venezuela, South America.

1 frog — Venezuela, South America.

- 1 turtle — Venezuela, South America.
- 31 fishes — Venezuela, South America.
- 1 frog — Quill Lake, Saskatchewan.
- 17 mammals — Saskatchewan.
- 1 moth — Margarita Islands.
- 835 bird skins — Margarita Islands.
- 15 mammal skins, 1 butterfly, 1 centipede — Margarita Islands.
- 195 bird skins — Saskatchewan.
- 36 sets of eggs (with nests) 192 eggs — Saskatchewan.
- 27 nests (without eggs) — Saskatchewan.
- Collected by Julius Friesser:
 - 208 grasshoppers, bugs, beetles and bees, wasps, etc. — Mexico.
- Collected by W. J. Gerhard:
 - 735 spiders, nerve-wings, grasshoppers, dragonflies, bugs, beetles, butterflies, moths, flies and bees, wasps, and parasites — Northern Illinois and Northern Indiana.
 - 1 lizard — Olive Branch, Illinois.
- Collected by S. F. Hildebrand:
 - 168 fishes — Stendal and Pikeville, Indiana.
 - 71 reptiles — Stendal and Pikeville, Indiana.
 - 1 millipede — Pikeville, Indiana.
- Collected by O. B. Lansing:
 - 1 beetle — Starved Rock, Illinois.
- Collected by S. B. Meek and W. Halm:
 - 360 fishes — Dry Tortugas, Florida.
 - 942 fishes — Key West, Florida.
 - 5 lizards — Key West, Florida.
- Collected by L. L. Eay:
 - 3 fox squirrel skins — Tallulah, Louisiana.
 - 4 gray squirrel skins — Tallulah, Louisiana.
 - 5 black fur squirrels — Tallulah, Louisiana.
 - 5 mice — Tallulah, Louisiana.
 - 12 squirrels — Tallulah, Louisiana.
 - 5 mice — Tallulah, Louisiana.
 - 2 bird skins — Tallulah, Louisiana.
 - 1 turkey buzzard — Tallulah, Louisiana.
 - 1 pileated woodpecker — Tallulah, Louisiana.
- Collected by V. Shelford and S. F. Hildebrand:
 - 254 fishes — Illinois.
 - 4 turtles.
 - 3 snakes.
 - 3 frogs.
- Collected by A. B. Wolcott:
 - 533 dragonflies, grasshoppers, bugs, moths, beetles, flies and bees, wasps, etc. — Illinois and Indiana.
- Purchases:
 - mounted reptiles as follows: 1 snake, 1 frog, 1 toad and 2 lizards — Europe.

- 1 small rodent — Darjeeling, India.
- 4 beetles — Darjeeling, India.
- 30 moths — Darjeeling, India.
- 210 butterflies — Darjeeling, India.
- 3 monkeys — British Guiana.
- 1 porcupine — British Guiana.
- 1 paca — British Guiana.
- 1 agenti — British Guiana.
- 1 bracket — British Guiana.
- 1 dog — British Guiana.
- 1 jaguar — British Guiana.
- 1 ocelot — British Guiana.
- 32 squirrels, muskrats, mice, minks, weasels, moles, and shrews,
2 flying lizards — Palawan, Philippine Islands.
- 215 shells — Palawan, Philippine Islands.
- 112 butterflies — Palawan, Philippine Islands.
- 3 moths — Palawan, Philippine Islands.
- 1 mantis — Palawan, Philippine Islands.
- 1 katydid — Palawan, Philippine Islands.
- 5 bees, parasites, etc. — Palawan, Philippine Islands.
- 34 beetles — Palawan, Philippine Islands.
- 2 sowbugs — Palawan, Philippine Islands.
- 2 spiders — Palawan, Philippine Islands.
- 1 mountain goat skin.
- 1 porpoise.
- 1 spoon bill cat fish — Scotts, Arkansas.
- 3,231 fishes — various localities.
- 1 golden eagle — Bozeman, Montana.
- 11 bird skins — Darjeeling, India.
- 1 wild turkey — Missouri.
- 18 bird skins — Jamaica, West Indies.
- 142 ducks, ibises, toucans, tinamous, parrots, hawks, woodpeckers,
humming-birds, and others mostly small passerine birds —
British Guiana.
- 1 American rough leg hawk — Geneva, Illinois.

FREEBURG, GUS., Liverpool, Indiana.

- 2 snakes — Liverpool, Indiana.

FRIESSER, JULIUS, Chicago.

- 19 beetles, flies, and specimens of scale insects — Illinois and Michigan.

- 3 turtles — McHenry, Illinois.

GERHARD, WM. J., Chicago.

- 16 grasshoppers, crickets, etc. — Eastern Pennsylvania, Southern New Jersey, and Maryland.

GLYNN, PETER, Chicago.

- 1 salamander — Downer's Grove, Illinois.

GREGOR, DARLING K., Fulton, Missouri.

- 25 lizards — Oklahoma.
- 7 frogs — Oklahoma.

GUERET, E. N., Chicago.

- 1 short eared owl — Grass Lake, Illinois.
- 4 red wing black birds — Grass Lake, Illinois.
- 1 rusty black bird — Grass Lake, Illinois.
- 1 snake — Wauconda, Lake County, Illinois.

HARDEE, F. E., Chicago.

- 1 snake — India.
- 1 skeleton of snake.

HELLER, ISIDORE, Chicago.

- 1 owl (mounted).
- 1 cormorant (mounted).

HILDEBRAND, S. F., Chicago.

- 1 beetle — Chicago.
- 2 scorpions — Globe, Arizona.
- 5 lizards — Globe, Arizona.

HOWE, MURRAY, Chicago.

- 2 skulls of bear — Alaska.

HURTER, JULIUS, St. Louis, Missouri.

- 19 reptiles (exchange).

JACKSON, H. H. T., Madison, Wisconsin.

- 3 owls, 2 shorebirds, 1 bobwhite, 2 woodpeckers, 8 passerine birds — Wisconsin (exchange).

KWIAT, ALEX., Chicago.

- 1 fly — Palos Park, Illinois.

MCCOY, G. W., San Francisco, California.

- 5 rats — San Francisco, California.
- 1 mole — San Francisco, California.
- 1 weasel — San Francisco, California.
- 15 fleas — San Francisco, California.

McINTYRE, G., Walworth, Wisconsin.

- 6 moths — Walworth, Wisconsin.

MOULTON, MRS. G. M., Chicago.

- 1 spine of catfish — Caribbean Sea.

MUNZNER, H., Chicago.

- 1 bumblebee — Chicago.

OSGOOD, W. H., Chicago.

- 1 skunk skull.
- 1 raccoon skull.

PARK FISHERMEN, Jackson Park, Chicago.

- 1 turtle — Jackson Park, Chicago.

RADDATZ, R. C., Chicago.

- 2 woodchuck skulls — Dry Bay, Alaska.

RAVEN, HENRY F., Simon, Costa Rica.

- 1 squirrel skin — Simon, Costa Rica.
- 1 oriole — Cumana, Venezuela.
- 1 parrot — Cumana, Venezuela.
- 47 bird skins — Costa Rica and Venezuela.

SETON, ERNEST T., Cos Cob, Connecticut.

- 16 mice and shrews.

SKINNER, HENRY, Philadelphia, Pennsylvania.

2 butterflies — Ft. Wingate, New Mexico.

SMITH, C. F., Chicago.

8 wasps — San Carlos, Vera Cruz, Mexico.

10 bees — Chicago.

1 katydid — Palos Park, Illinois.

1 bees — Chicago, Illinois.

SMITH, AUSTIN PAUL, Brownsville, Texas.

1 rock wren — Brownsville, Texas.

1 cardinal — Brownsville, Texas.

1 titmouse — Brownsville, Texas.

1 sparrow — Brownsville, Texas.

1 warbler — Brownsville, Texas.

1 water thrush — Brownsville, Texas.

STEVENS, MRS. A., Chicago.

1 beetle — Chicago.

THAYER MUSEUM, Lancaster, Massachusetts.

41 sets of bird's eggs including 73 eggs — Lower California.

THOMPSON, S. L., Chicago.

1 ichneumon fly — Chicago.

TUTTLE, MRS. M.

40 bryozoans — Santa Cruz, California.

UNITED STATES DEPARTMENT OF COMMERCE AND LABOR

Washington, D. C.

50 fresh-water shells — [redacted] localities.

UNITED STATES EXPRESS COMPANY, Chicago.

1 monkey.

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

2 squirrels — Venezuela (exchange).

WEBER, C. M., Palawan, Philippine Islands.

2 shells — Tara Islands, Palawan.

1 shell — Bacuit, Palawan.

3 shells — Coron Islands, Palawan.

1 shell — Binga, Mt. Capons, Palawan.

1 shell — Palawan.

WILLARD, F. C., Tombstone, Arizona.

4 snakes — Tombstone, Arizona.

WOLCOTT, A. B., Chicago.

1 moth — Chicago.

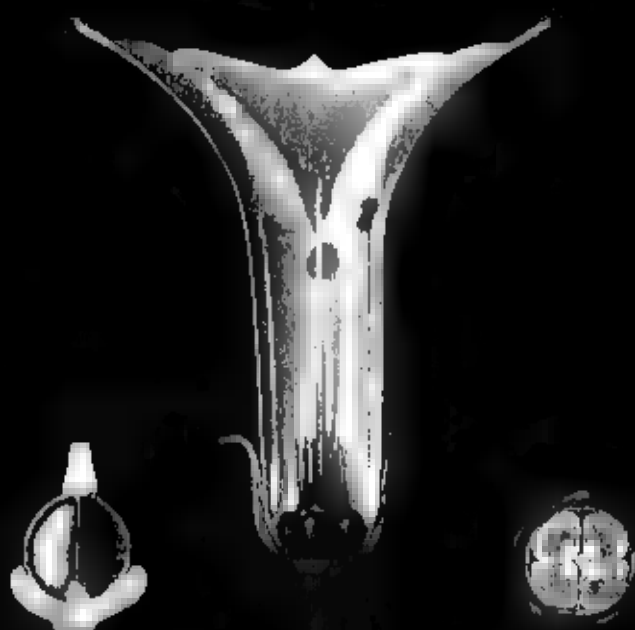
1 moth — North Evanston, Illinois.

1 beetle — New Harmony, Indiana.

1 wasp — New Harmony, Indiana.

1 turtle — West Pullman, Illinois.

1 toad — West Pullman, Illinois.



Section of the ovary.

Section of the ovary.

ENLARGED FLOWER OF A MORNING GLORY.

(From Nature).

HAND-MADE FAMILY CHARACTERISTICS.

Floral Diagram.

Floral Diagram.

FLOWERS: Arranged singly or in clusters that spring from the axils of the leaves.

CALYX: Of 5 segments equal in two series the outer overlapping (to some degree at least) the inner.

COROLLA: Of 5 petals completely united into a bell-shaped or cylindrical, fluted corolla, the rim being mostly entire though sometimes lobed.

STAMENS: 5, in two series one shorter than the other, the bases inserted upon the tube of the corolla, the anthers not rising above the rim.

STYLE: Single, slender, tipped with a 2-lobed stigma.

OVARY: (Partly invested by a fleshy disk) 2-5 celled (usually 2) with two seeds in each cell.

SEEDS: With or without a long fringe of hairs on the angles.

Reprinted photograph from Nature by G. B. Allington, 1905.

Enlarged Model of a Convolvulaceous Flower.

SECTION OF PHOTOGRAPHY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

DAYKIN BROTHERS, Cleveland, Ohio.

16 views of Bermuda scenery (exchange).

FIELD MUSEUM OF NATURAL HISTORY.

Made by C. H. Carpenter:

2,142 negatives, 6,977 prints, 1,273 lantern slides, 53 enlargements.

84 Lumiere Autochrome photographs, 875 negatives developed.

Made by F. C. Cole:

6 portraits of natives, etc. — Philippine Islands.

Made by O. C. Farrington:

54 negatives of general views — Bermuda Islands.

24 negatives of general views — Mexico.

18 negatives of general views — California and Arizona.

Made by J. F. Perry:

300 negatives of general views — Saskatchewan.

Made by S. E. Meek:

84 negatives of fishes, views, etc. — Florida.

Made by W. H. Osgood:

■ negatives of landscapes — South Chicago.

Made by H. H. Smith:

12 portraits of ■■■ — Chicago.

146 portraits of trees, landscapes, etc. — West Virginia.

36 portraits of trees, landscapes, etc.

Purchases:

721 portraits, views, landscapes, etc.

465 portraits of mammals.

80 views of India and types of natives.

6 colored lantern slides — Bermuda.

10 lantern slides — Bermuda.

32 lantern slides — Bermuda and the Colorado River.

34 lantern slides — Alaska.

SKIFF, FREDERICK J. V., Chicago.

9 portraits of living mammals.

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

1 portrait of adult walrus.

THE LIBRARY.

BOOKS, PAMPHLETS, AND SERIALS.

(ACCESSIONS ARE BY EXCHANGE UNLESS OTHERWISE DESIGNATED.)

ABERDEEN UNIVERSITY, Aberdeen, Scotland.

1 reprint.

ADAMS, P. D. T., Montreal, Canada.

1 pamphlet.

ALABAMA AGRICULTURAL EXPERIMENT STATION, Auburn, Alabama.

Bulletin, current numbers (gift).

ALLEN, J. A., New York City.

2 reprints.

AMANI-BIOLOGISCH LANDWIRTSSCHAFT-INSTITUT, Deutsch Ostafrika.

Der pflanzer, v. 5, no. 1-8.

AMERICAN ACADEMY OF ARTS AND SCIENCES, Boston, Massachusetts.

Proceedings, current numbers.

AMERICAN ANTIQUARIAN SOCIETY, Boston, Massachusetts.

Proceedings, current numbers.

AMERICAN ASSOCIATION OF MUSEUMS, Pittsburgh, Pennsylvania.

Proceedings, v. 2, 1908.

AMERICAN CHEMICAL JOURNAL PUBLISHING COMPANY, Baltimore, Maryland.

Journal, current numbers.

AMERICAN FOLK-LORE SOCIETY, Cambridge, Massachusetts.

Journal, current numbers.

AMERICAN GEOGRAPHICAL SOCIETY, New York City.

Bulletin, current numbers.

AMERICAN INSTITUTE OF MINING ENGINEERS, New York City.

Transactions, v. 39, 1908.

Yearbook, 1909.

AMERICAN MINING CONGRESS, Denver, Colorado.

Report of proceedings, 11th annual session, 1908 (gift).

AMERICAN MUSEUM OF NATURAL HISTORY, New York City.

43 publications.

AMERICAN ORIENTAL SOCIETY, New Haven, Connecticut.

Journal, v. 29.

AMERICAN PHILOSOPHICAL SOCIETY, Philadelphia.

Proceedings, current numbers.

AMES BOTANICAL LABORATORY, Easton, Pennsylvania.

Contributions, no. 9.

AMSTERDAM. DUTCH ROYAL GEOGRAPHICAL SOCIETY, Amsterdam, Netherlands.

Zuidwest Nieuw-Guinea Expeditie, 1904-5.

AMSTERDAM K. AKADEMIE VAN WETENSCHAPPEN, Amsterdam, Netherlands.

6 publications.

ANGERS. SOCIÉTÉ D'ÉTUDES SCIENTIFIQUES, Angers, France.

Bulletin, v. 37.

ANGERS. SOCIÉTÉ NATIONALE D'AGRICULTURE, SCIENCES ET ARTS, Angers, France.

Mémoires, v. 10.

ANNALES DES MINES, Paris, France.

Current numbers.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND, London, England.

Journal, current numbers.

- ARCHAEOLOGICAL INSTITUTE OF AMERICA, New York City.
American journal of archaeology, current numbers.
Index, vol. 1-10.
- ARCHIV FÜR RELIGIONSWISSENSCHAFT, Leipzig, Germany.
Current numbers.
- ARCTOWSKI, HENRY K., Melle, Belgium.
1 pamphlet (gift).
- ARDENNES. SOCIÉTÉ D'HISTOIRE NATURELLE, Ardennes, France.
Bulletin, current numbers.
- ARIZONA AGRICULTURAL EXPERIMENT STATION, Tucson, Arizona.
Annual report, no. 19, 1908.
Bulletin, current numbers.
- ARKANSAS AGRICULTURAL EXPERIMENT STATION, Fayetteville, Arkansas.
Bulletin, current numbers.
- ARMOUR INSTITUTE OF TECHNOLOGY, Chicago.
■ publications.
- ASIATIC SOCIETY OF BENGAL, Calcutta, India.
Proceedings, current numbers.
- ASSOCIATION OF ENGINEERING SOCIETIES, Philadelphia.
Journal, current numbers.
- ATKINSON, GEORGE F., Ithaca, New York.
3 reprints.
- AUGSBURG NATURHISTORISCHER VEREIN, Augsburg, Germany.
Bericht, 1908.
- AUSTRALASIAN ASSOCIATION FOR ADVANCEMENT OF SCIENCE, Adelaide, Australia.
Report, no. 11, 1907.
- AUSTRALIAN MUSEUM, Sydney, New South Wales.
Report, 1908.
4 publications.
- AYER, EDWARD E., Chicago.
■ volumes (gift).
- AZAMBUJA DE, GRACIANO A., Porto Alegre, Brazil.
1 publication.
- BAKER, HENRY D., Hobart, Tasmania.
3 pamphlets (gift).
- BALCH, E. S., Philadelphia.
1 pamphlet.
- BARBER, EDWIN ATLEE, Philadelphia.
1 publication.
- BATAVIAASCH GENOOTSCHAP VAN KUNSTEN EN WETENSCHAPPEN, Batavia, Java.
Tijdschrift, v. 51, no. 3-4.
Verhandeligen, v. 57.
- BATH NATURAL HISTORY AND ANTIQUARIAN FIELD CLUB, Bath, England.
Proceedings, v. 11, no. 3.

- BAYERN. ORNITHOLOGISCHE GESELLSCHAFT, Munich, Germany.
Mitteilungen, current numbers.
Verhandlungen, v. 8.
- BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY,
Belfast, Ireland.
Report and proceedings, 1907-8.
- BELFAST NATURALISTS' FIELD CLUB, Belfast, Ireland.
Proceedings, current numbers.
- BELOIT COLLEGE, Beloit, Wisconsin.
Catalogue, 1908-9.
- BERGENS MUSEUM, Bergen, Norway.
2 publications.
- BERLIN. DEUTSCHE GEOLOGISCHE GESELLSCHAFT, Berlin, Germany.
Monatschrift, current numbers.
Zeitschrift, current numbers.
- BERLIN. DEUTSCHE GESELLSCHAFT FÜR ANTHROP., ETHNOL.
UND URGS., Berlin, Germany.
Zeitschrift für ethnologie, current numbers.
- BERLIN. DEUTSCHE GESELLSCHAFT FÜR ERDKUNDE, Berlin,
Germany.
Bibliotheca geographica, v. 14.
Zeitschrift, current numbers.
- BERLIN. DEUTSCHE GESELLSCHAFT FÜR VOLKSTUMLEHRE, Berlin,
Germany.
Naturwochenschrift, current numbers.
- BERLIN. DEUTSCHE UNIVERSITÄT, Berlin, Germany.
Jahres-verzeichnis, v. 23.
- BERLIN. K. BIBLIOTHEK, Berlin, Germany.
Jahresbericht, 1908-9.
- BERLIN. K. BOTANISCHER GARTEN UND MUSEUM, Berlin, Germany.
Notizblatt, no. 44, 45.
- BERLIN. K. PREUSSISCHE AKADEMIE DER WISSENSCHAFTEN,
Berlin, Germany.
Sitzungsberichte, current numbers.
- BERLIN. VEREIN FÜR VOLKSKUNDE, Berlin, Germany.
Zeitschrift, current numbers.
- BERLIN. ZOOLOGISCHES MUSEUM, Berlin, Germany.
Bericht, 1908.
Mitteilungen, current numbers.
- BERN UNIVERSITÄT, Bern, Switzerland.
■ dissertations.
- BERNICE PAUAAHI BISHOP MUSEUM, Honolulu, Hawaiian Islands.
3 publications.
- BÖHMEN NATURWIS. LANDESDURCHFORSCHUNG, Prag, Austria.
Archiv, v. 13, no. 2; v. 14, no. 2.
- BOMAN, ERIC, Paris, France.
Antiquités de la région andine.

- BOMBAY ANTHROPOLOGICAL SOCIETY, Bombay, India.
Journal, current numbers.
- BONN. NATURHISTORISCHER VEREIN, Bonn, Germany.
Sitzungsberichte, 1908.
Verhandlungen, v. 65, pt. 1.
- BORDEAUX. SOCIÉTÉ LINNÉENNE, Bordeaux, France.
Procès-verbaux, v. 62.
- BOSTON MUSEUM OF FINE ARTS, Boston, Massachusetts.
5 publications.
- BOSTON PUBLIC LIBRARY, Boston, Massachusetts.
Annual report, no. 57, 1908-9.
- BOSTON SOCIETY OF NATURAL HISTORY, Boston, Massachusetts.
3 publications.
- BOSTON TRANSIT COMMISSION, Boston, Massachusetts.
Annual report, no. 14, 1908.
- BOSTON UNIVERSITY, Boston, Massachusetts.
President's report, 1907-8.
Yearbook, v. 36.
- BOWDOIN COLLEGE, Brunswick, Maine.
Catalogue, 1908-1909.
Librarian's report, 1908-9.
- BRAND, CHARLES J., Washington, D. C.
Guide to modern Peru (gift).
- BRANDEGEE, T. S., Berkeley, California.
1 separate.
- BRANDENBURG BOTANISCHER VEREIN, Brandenburg, Germany.
Verhandlungen, v. 50.
- BRAUNSCHWEIG VEREIN FÜR NATURWISSENSCHAFT, Braunschweig, Germany.
Jahresbericht, 1908.
- BREMEN. NATURWISSENSCHAFTLICHER VEREIN, Bremen, Germany.
1 publication.
- BRIGHTON AND HOVE NATURAL HISTORY AND PHILOSOPHICAL SOCIETY, Brighton, England.
Abstracts of papers and annual report, 1908.
- BRISTOL MUSEUM AND ART GALLERY, Bristol, England.
Report, 1908.
- BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, London, England.
Report, Dublin meeting, 1908.
- BRITISH COLUMBIA LEGISLATIVE ASSEMBLY, Victoria, British Columbia.
Sessional papers, 1908, 1909.
- BRITISH COLUMBIA MINISTER OF MINES, Victoria, British Columbia.
Annual report, 1908.
- BRITISH COLUMBIA PROVINCIAL MUSEUM, Victoria, British Columbia.
Visitors' guide.

- BRITISH MUSEUM (NATURAL HISTORY), London, England.
12 publications.
- BROOKLYN INSTITUTE OF ARTS AND SCIENCES, Brooklyn, New York.
46 publications.
- BRÜNN. LANDWIRTSCHAFT LANDES VERSUCHSSTATION FÜR PFLANZENKULTOR, Brünn, Austria.
Bericht, 1907-8.
- BRÜNN. NATURFORSCHENDER VEREIN, Brünn, Austria.
Verhandlungen, v. 46.
- BRUSSELS. ACADEMIE ROYALE DES SCIENCES, DES LETTRES ET DES BEAUX-ARTS, Brussels, Belgium.
Annuaire, 1909.
Bulletin, current numbers.
- BRUSSELS. JARDIN BOTANIQUE DE L'ETAT, Brussels, Belgium.
La végétation = Belgique.
- BRUSSELS. MUSÉE ROYALE D'HISTOIRE NATURELLE, Brussels, Belgium.
1 extract.
- BRUSSELS. SOCIÉTÉ D'ARCHÉOLOGIE, Brussels, Belgium.
Annales, current numbers.
Annuaire, v. 20.
- BRYN MAWR COLLEGE, Bryn Mawr, Pennsylvania.
Calendar, 1909.
Monographs, reprint series, v. 7.
- BUDAPEST. SOCIÉTÉ ROYALE HONGROISE DES SCIENCES NATURELLES, Budapest, Hungary.
Aquila, current numbers.
- BUENOS AIRES. FACULTAD DE FILOSOFIA Y LETRAS, Buenos Aires, Argentina.
Publications, no. 4-5.
- BUENOS AIRES. MUSEO DE FARMACOLOGIA, Buenos Aires, Argentina.
3 publications.
- BUENOS AIRES. MUSEO NACIONAL, Buenos Aires, Argentina.
Anales, ser. 3, t. 10.
1 pamphlet.
- BUFFALO PUBLIC LIBRARY, Buffalo, New York.
Annual report, no. 12.
- BUFFALO SOCIETY OF NATURAL SCIENCES, Buffalo, New York.
Bulletin, current numbers.
- BITENZORG. DEPARTMENT OF AGRICULTURE, Buitenzorg, Java.
Bulletin, current numbers.
1 separate.
- BITENZORG. S'LANDS PLANTENTUIN, Buitenzorg, Java.
9 publications.
- BURMA. ARCHAEOLOGICAL SURVEY, Burma, India.
Report, 1908-9.

- CALCUTTA. ROYAL BOTANIC GARDENS, Calcutta, India.
Annals, v. 11.
- CALIFORNIA ACADEMY OF SCIENCES, San Francisco, California.
Proceedings, current numbers.
- CALIFORNIA AGRICULTURAL EXPERIMENT STATION, Berkeley, California.
Bulletin, current numbers.
Circulars, current numbers.
- CALIFORNIA STATE LIBRARY, Sacramento, California.
Biennial report, 1906-1908.
Occasional papers, current numbers.
- CALIFORNIA STATE MINING BUREAU, San Francisco, California.
Bulletin, 46, 50-53.
Map.
Report, Board of Trustees, 1908.
- CALIFORNIA UNIVERSITY, Berkeley, California.
32 publications.
- CALL, R. ELLSWORTH, New York City.
6 publications.
- CAMBRIDGE ANTIQUARIAN SOCIETY, Cambridge, England.
List of members, etc., 1909.
Proceedings, current numbers.
- CAMBRIDGE MUSEUM AND LECTURE ROOMS SYNDICATE, Cambridge, England.
Annual report, no. 43, 1908.
- CAMBRIDGE PHILOSOPHICAL SOCIETY, Cambridge, England.
Proceedings and transactions, current numbers.
- CAMBRIDGE PUBLIC LIBRARY, Cambridge, Massachusetts.
Annual report, 1908-9.
Bulletin, current numbers.
- CAMBRIDGE UNIVERSITY LIBRARY, Cambridge, England.
Report, 1908.
- CAMERANO, LORENZO, Milano, Italy.
■ pamphlets.
- CAMPINAS CENTRO DE CIENCIAS, Sao Paulo, Brazil.
Revista, current numbers.
- CANADA. BOTANICAL SOCIETY, Halifax, Nova Scotia.
Report, 1906-7, 1907-8.
3 pamphlets.
- CANADA. GOVERNMENT OF, Ottawa, Canada.
■ reports.
17 topographical sheets.
4 maps.
- CANADA. ROYAL SOCIETY, Ottawa, Canada.
Proceedings and transactions, 3d. ser., v. 2.
- CANADIAN INSTITUTE, Toronto, Canada.
Transactions, v. 8, no. 3.

CAPE OF GOOD HOPE. DEPARTMENT OF AGRICULTURE, Cape Town, South Africa.

13 publications.

CAPE TOWN. GOVERNMENT ENTOMOLOGIST, Cape Town, South Africa.

Report, 1908.

CARDIFF NATURALISTS' SOCIETY, Cardiff, Wales.

Transactions, v, 41.

CARDIFF PUBLIC LIBRARIES, Cardiff, Wales.

Annual report, no. 46, 1907-8.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING, New York City.

Annual report 1908 (gift).

CARNEGIE INSTITUTE, Pittsburgh, Pennsylvania.

4 publications.

CARNEGIE LIBRARY OF PITTSBURG, Pittsburgh, Pennsylvania.

Annual report, no. 13, 1909.

Bulletin, current numbers.

CARNEGIE MUSEUM, Pittsburgh, Pennsylvania.

5 publications.

CARPENTER, G. H., Dublin, Ireland.

Irish naturalist, current numbers.

CARTHAGE INSTITUTE, Tunis, Africa.

Revue tunisienne, current numbers.

CASSON, HERBERT N., Chicago.

1 publication (gift).

CATANIA. ACCADEMIA GIOENIA DI SCIENZE NATURALI, Catania, Italy.

Bollettino, current numbers.

CETTE. UNIVERSITÉ DE MONTPELLIER, INSTITUT DE ZOOLOGIE, Cette, France.

Mémoire, no. 17.

CEYLON AGRICULTURAL SOCIETY, Colombo, India.

9 publications.

CEYLON ROYAL BOTANIC GARDENS, Peradeniya, Ceylon.

11 publications.

CHARLESTON MUSEUM, Charleston, South Carolina.

7 publications.

CHICAGO ACADEMY OF SCIENCES, Chicago.

3 publications.

CHICAGO ART INSTITUTE, Chicago.

10 publications.

CHICAGO COMMERCIAL CLUB, Chicago.

Plan of Chicago (gift).

CHICAGO HISTORICAL SOCIETY, Chicago.

Annual report, 1908.

CHICAGO PUBLIC LIBRARY, Chicago.

6 publications.

- CHICAGO. SOUTH PARK COMMISSIONERS, Chicago.
Report, 1906-1908.
- CHICAGO UNIVERSITY, Chicago.
70 publications.
- CHILE. BIBLIOTECA NACIONAL, Santiago de Chile.
27 publications.
- CHRISTIANIA MINERALOGICAL INSTITUTE, Christiania, Norway
3 publications.
- CINCINNATI MUSEUM ASSOCIATION, Cincinnati, Ohio.
Annual report, 1908.
- CINCINNATI PUBLIC LIBRARY, Cincinnati, Ohio.
8 publications.
- CINCINNATI UNIVERSITY, Cincinnati, Ohio.
15 publications.
- CLARK UNIVERSITY, Worcester, Massachusetts.
11 publications.
- CLARKE, JOHN M., Albany, New York.
1 bulletin.
- CLEVELAND PUBLIC LIBRARY, Cleveland, Ohio.
11 publications.
- COGNIAUX, A.
4 separates.
- COIMBRA UNIVERSITY LIBRARY, Coimbra, Portugal.
Boletim, current numbers.
- COLBY COLLEGE, Waterville, Maine.
Catalogue, 1908-9.
- COLE, FAY COOPER, Chicago.
1 pamphlet.
- COLLEGIO DE S. FIEL, S. Fiel, Portugal.
Broteria, current numbers.
- COLLIERY ENGINEER COMPANY, Scranton, Pennsylvania.
Mines and minerals, current numbers.
- COLLINGE, WALTER E., Berkhamsted, England.
5 reprints.
- COLMAR. SOCIÉTÉ D'HISTOIRE NATURELLE, Colmar, Germany.
Mitteilungen, B. 9, 1907-8.
- COLN. RAUTENSTRAUCH-JOEST-MUSEUM FÜR VOLKERKUNDE,
Cologne, Germany.
Ethnologica, v. 1.
- COLOMBO MUSEUM, Colombo, India.
Administrative report, 1908.
Spolia zeylanica, current numbers.
- COLORADO BUREAU OF MINES, Denver, Colorado.
Report, 1907-8.
- COLORADO COLLEGE, Colorado Springs, Colorado.
Studies, science ser., current numbers.
- COLORADO STATE AGRICULTURAL COLLEGE, Fort Collins, Colorado.
16 publications.

COLORADO STATE HISTORICAL AND NATURAL HISTORY SOCIETY, Denver, Colorado.

Biennial report, 1906-8.

COLUMBIA UNIVERSITY, New York City.

32 publications.

CONCARNEAU. Laboratoire de zoologie et de physiologie maritimes, Concarneau, France.

Travaux scientifiques, t. I, fasc. 3-5.

CONCILIATION INTERNATIONALE, Paris, France.

2 pamphlets.

CONNECTICUT ACADEMY OF SCIENCE, New Haven, Connecticut.

Transactions, v. 13.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION, New Haven, Connecticut.

Bulletin, current numbers.

Report, nos 31-32, 1907-8.

COOK, MELVILLE T., Newark, Delaware.

2 reprints.

COOPER ORNITHOLOGICAL CLUB, Hollywood, California.

10 publications.

COOPER UNION FOR THE ADVANCEMENT OF SCIENCE, New York City.

Annual report, no. 50.

COPENHAGEN BOTANIC GARDEN, Copenhagen, Denmark.

2 publications.

COPENHAGEN. K. BIBLIOTHEK, Copenhagen, Denmark.

Aarsberetning, 1906-1909.

COPENHAGEN NATURHISTORISK FORENING, Copenhagen, Denmark.

Videnskabelige meddelelser, 1908.

CORNELL UNIVERSITY, Ithaca, New York.

Librarian's report, 1907-8.

1 pamphlet.

COSTA RICA MUSEO NACIONAL, San José, Costa Rica.

6 publications.

CROSS, WHITMAN, Washington, D. C.

2 separates.

CROYDON NATURAL HISTORY AND SCIENTIFIC SOCIETY, Croydon, England.

Proceedings and transactions, 1907-8.

CUBA. ESTACION CENTRAL AGRONOMICA, Santiago de las Vegas, Cuba.

10 publications.

CULLOM, S. M., Washington, D. C.

Official register, U. S., v. 1-2.

CZERNOWITZ. K. K. FRANZ JOSEPH UNIVERSITÄT, Czernowitz, Austria.

4 reports.

DARMSTADT. VEREIN FÜR ERDKUNDE, Darmstadt, Germany.

Notizblatt, 1908.



Slab of fossil crinoids (*Uindacrinus socialis*), showing more than 200 individuals. Size, $7\frac{1}{2} \times 4\frac{1}{2}$ feet

- DELAWARE COLLEGE AGRICULTURAL EXPERIMENT STATION,
Newark, Delaware.
Bulletin, current numbers.
- DELAWARE COUNTY INSTITUTE OF SCIENCE, Media, Pennsylvania.
Proceedings, current numbers.
- DENISON UNIVERSITY, Granville, Ohio.
Bulletin, current numbers.
- DETROIT MUSEUM OF ART, Detroit, Michigan.
Annual report, 1908.
Bulletin, current numbers.
- DETROIT PUBLIC LIBRARY, Detroit, Michigan.
Annual report, no. 44, 1908.
Bulletin, no. ■.
- DEUTSCHE DENDROLOGISCHE GESELLSCHAFT, Bonn, Poppelsdorf.
Mitteilungen, 1908, 1909.
- DEUTSCHER NATUR. MEDISIN. VEREIN FÜR BÖHMEN "LOTUS,"
Prag, Austria.
35 publications.
- DIAL PUBLISHING COMPANY, Chicago.
Dial, current numbers.
- DIBBLEE, MRS. HENRY M., Lake Forest, Illinois.
Parrots in captivity, 2 vols., Greene, W. T.
- DIXON, ROLAND B., Cambridge, Massachusetts.
3 reprints.
- DORSEY, GEORGE A., Chicago.
32 miscellaneous publications.
- DRESDEN. GENERAL-DIRECTION DER K. SAMMLUNGEN FÜR
KUNST UND WISSENSCHAFT, Dresden, Germany.
Bericht, 1906-7.
- DRESDEN. GESELLSCHAFT FÜR NATUR-UND HEILKUNDE,
Dresden, Germany.
Jahresberichte, 1907-8.
- DRESDEN. K. ZOOLOGISCHES UND ANTHROPOLOGISCH-ETH-
NOGRAPHISCHES MUSEUM, Dresden, Germany.
Abhandlungen und bericht, current numbers.
- DRESDEN. NATURWISSENSCHAFTLICHE GESELLSCHAFT "ISIS,"
Dresden, Germany.
Sitzungsberichte und abhandlungen, current numbers.
- DUBLIN NATIONAL MUSEUM OF SCIENCE AND ART, Dublin, Ire-
land.
List of Irish birds.
Proceedings, current numbers.
- DUBLIN. ROYAL IRISH SOCIETY, Dublin, Ireland.
Proceedings, current numbers.
- DUBLIN. ROYAL ZOOLOGICAL SOCIETY OF IRELAND, Dublin, Ire-
land.
Annual report, 1908.

DUMFRIESSHIRE AND GALLOWAY NATURAL HISTORY AND ANTIQUARIAN SOCIETY, Dumfriesshire, Scotland.

Transactions and journal of proceedings, v. 19, 20.

EALING SCIENTIFIC AND MICROSCOPICAL SOCIETY, London, England.

Report and transactions, 1908-9.

EAST KENT SCIENTIFIC AND NATURAL HISTORY SOCIETY, East Kent, England.

Report and transactions, v. 8.

EDER, ROBERT, Mödling, Austria-Hungary.

1 publication (gift).

EDINBURGH GEOLOGICAL SOCIETY, Edinburgh, Scotland.

Transactions, v. 9, nos. 3-4.

EDINBURGH ROYAL BOTANIC GARDENS, Edinburgh, Scotland.

Notes, 1908.

EDINBURGH ROYAL SCOTTISH MUSEUM, Edinburgh, Scotland.

Guide, collection of rocks.

Report, 1908.

EDINBURGH ROYAL SOCIETY, Edinburgh, Scotland.

Proceedings and transactions, current numbers.

EGYPT. SURVEY DEPARTMENT, Giza, Egypt.

4 publications.

EIGENMANN, CARL H., Bloomington, Indiana.

5 separates.

ELBERFELD NATURWISSENSCHAFT. VEREIN, Elberfeld, Germany.

Jahresberichte, no. 12.

ELECTROCHEMICAL AND METALLURGICAL INDUSTRY PUBLISHING COMPANY, New York.

1 pamphlet.

ELISHA MITCHELL SCIENTIFIC SOCIETY, Chapel Hill, North Carolina.

Journal, current numbers.

ELLIS, HAVELOCK, Paris, France.

1 publication.

EMERSON, ALFRED, Chicago.

1 pamphlet (gift).

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA, Pittsburgh, Pennsylvania.

Proceedings, current numbers.

ENOCH PRATT FREE LIBRARY, Baltimore, Maryland.

Annual report, no. 23, 1908.

Bulletin, v. 14.

ERRERA, LEO, MME., Brussels, Belgium.

4 botanical publications (gift).

ESSEX INSTITUTE, Salem, Massachusetts.

5 publications.

EWART, ALFRED J., Melbourne, Australia.

2 pamphlets.

FARRINGTON, O. C., Chicago.

45 pamphlets.

3 maps.

PESTA, E.

2 pamphlets.

FIELD MUSEUM OF NATURAL HISTORY, Chicago.

585 books.

431 pamphlets (purchase).

FLEMING, JAMES H.

2 reprints.

FLORIDA AGRICULTURAL EXPERIMENT STATION, Tallahassee.
Florida.

Annual report, 1908.

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10 publications.
- PENNSYLVANIA UNIVERSITY, Philadelphia, Pennsylvania.
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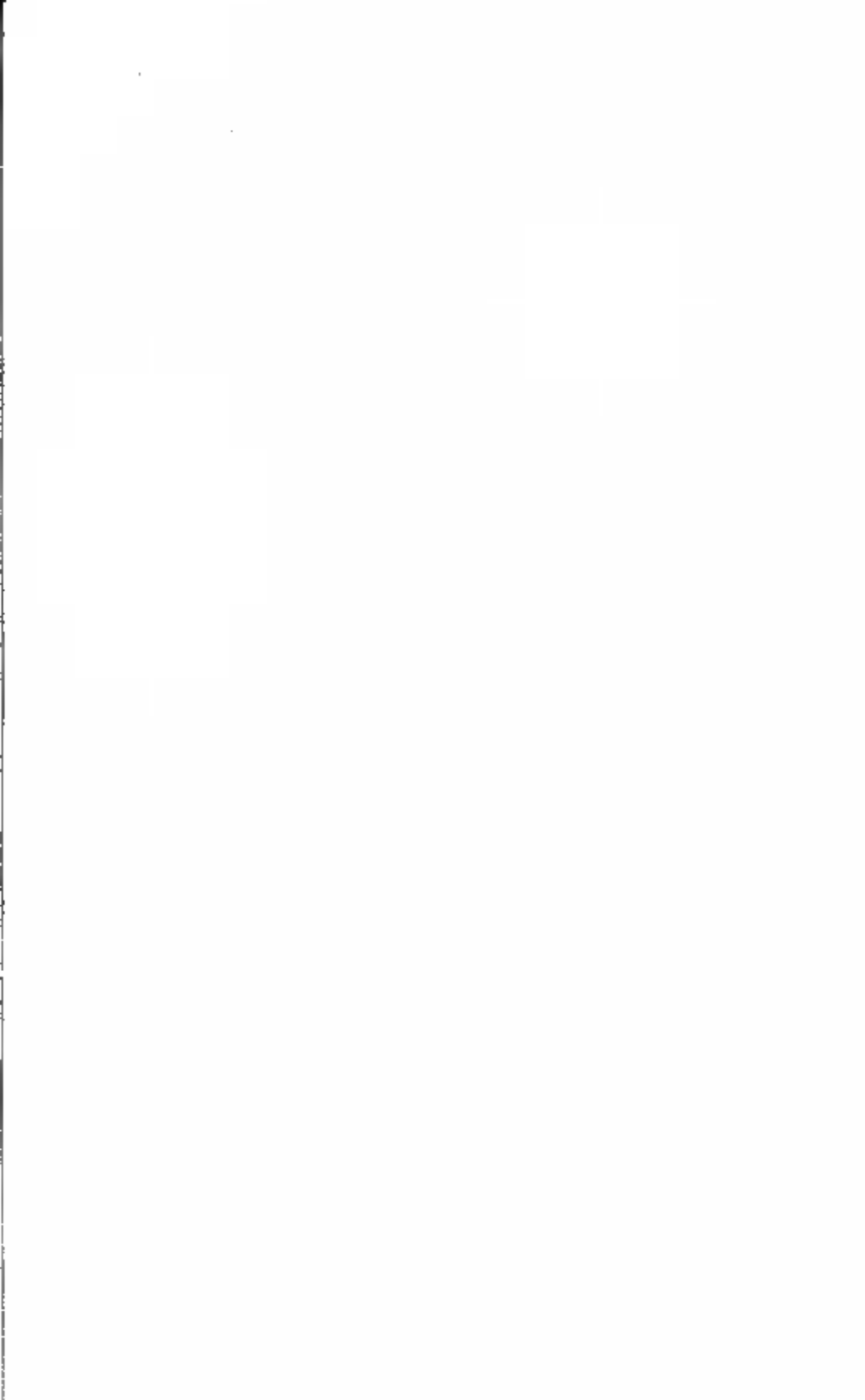
JOSEPH I., Prag, Austria.

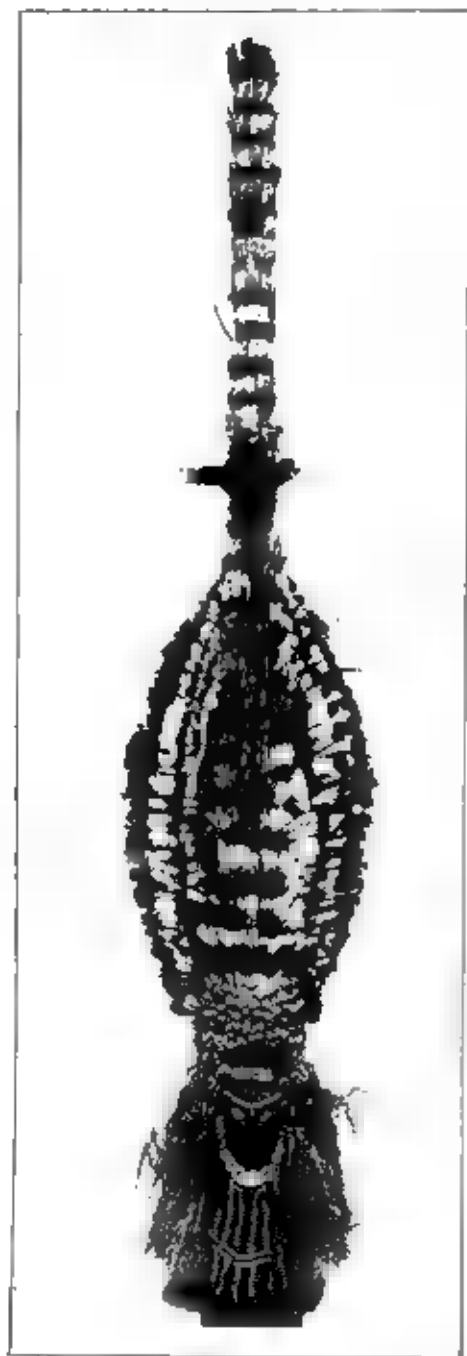
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- SMITHSONIAN INSTITUTION, Washington, D. C.
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- VENEZUELA. ESTADISTICA DE LOS ESTADOS UNIDOS, Caracas, Venezuela.
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- VERMONT AGRICULTURAL EXPERIMENT STATION, Burlington, Vermont.
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11 publications.
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3 reprints.
- WELLINGTON ACCLIMATIZATION SOCIETY, Wellington, New Zealand.
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3 publications.
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Publications, current numbers.
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Bulletin, current numbers.
- WEST VIRGINIA STATE BOARD OF AGRICULTURE, Charleston, West Virginia.
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2 separates.
- WILLIAMS COLLEGE, Williamstown, Massachusetts.
2 catalogues.
- WILLISTON, S. W., Chicago.
■ reprints.
- WILSON ORNITHOLOGICAL CLUB, Oberlin, Ohio.
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Madison, Wisconsin.
Bulletin, current numbers.
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31 publications.
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Bulletin, nos. 3-4.
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- WREN, CHRISTOPHER, Athens, Pennsylvania.
1 pamphlet (gift).
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Jahreshefte, no. 65, with 2 beilage.
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- WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, Wilkes-Barre,
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Proceedings and collections, v. 10.
- YALE UNIVERSITY, New Haven, Connecticut.
3 publications.
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3 separates.
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- ZÜRICH BOTANISCHES MUSEUM DER UNIVERSITÄT, Zürich, Switz-
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Egyptian Sarcophagus, of Granite.

ARTICLES OF INCORPORATION.

STATE OF ILLINOIS.

DEPARTMENT OF STATE.

WILLIAM H. HINRICHSEN, *Secretary of State.*

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

Now, therefore, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSEN,

[SEAL.]

Secretary of State.

TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned, citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archaeology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons ■■■ hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(Signed).

George E. Adams, C. B. Farwell, Sidney C. Eastman, P. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John ■. Clark, Hennessey H. Kohlmaat, George Schneider, Henry H. Getty, William R. Harper, Frank-Hu H. Head, E. G. Keith, J. Irving Pearce, Axel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, George F. Bissell, John R. Walsh, Chas. Pittsimons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. P. Gunther, George R. Davis, Stephan A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS }
COOK COUNTY } ss.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed ■■■ foregoing petition ■ their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

CHANGE OF NAME.

Pursuant to ■ resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the ■■■ of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

CHANGE OF NAME.

Pursuant to a resolution passed at ■ meeting of the Corporate members held the 8th day of November, 1905, the ■■■ of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.

AMENDED BY-LAWS.

(APRIL 12, 1909.)

ARTICLE I.

MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons, and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as ■ selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

First. — Free admittance for the member and family to the Museum on any day.

Second. — Ten tickets every year, admitting the bearer to the Museum on pay days.

Third. — A copy of all publications of the Museum when requested.

Fourth. — Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons ■ shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the ■ of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time, shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons, or Honorary Members shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the ■ day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars (\$500.00), at any ■ time, shall, upon the unanimous vote of the Board, become a Life Member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from ~~the~~ dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SEC. 6. Honorary Members shall ~~be~~ ~~chosen~~ by the Board from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

ARTICLE II.

BOARD OF TRUSTEES.

SECTION 1. The Board of Trustees shall consist of fifteen members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled at a regular meeting of the Board, upon the nomination of the Executive Committee made at a preceding regular meeting, by a majority vote of the members of the Board present.

SEC. 2. Regular meetings of the Board shall ~~be~~ held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon ~~the~~ written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers. ~~The~~ the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any ~~one~~ number from day to day, or to a day fixed, previous to ~~the~~ next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

ARTICLE III.

OFFICERS.

SECTION 1. The officers ~~shall~~ be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary, and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary ~~to~~ elect. The President, the First Vice-President, and the Second Vice-President ~~shall~~ be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such ~~as~~ shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

ARTICLE IV.

THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation. He shall make disbursements only upon warrants drawn by the Director

and countersigned by the President. In the absence or inability of the Director warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrants shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed. It shall be no part of the duties of the Treasurer to see that the warrants have been issued in conformity with such vouchers.

SAC. 2. The securities and muniments of title belonging to the Corporation shall be placed in the custody of [] Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities [] the same become due, and pay [] to the Treasurer. Said Trust Company shall allow access to and deliver any or all securities or muniments of title [] the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SAC. 3. The Treasurer shall give bond in such amount, and with such sureties, [] shall be approved by the Board of Trustees.

SAC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director, and the Chairman of the Administration Committee. All vouchers executed for expenditures for the construction or reconstruction of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or, in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

ARTICLE V.

THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of the Museum, and shall control the operations of the institution, subject to the authority of the Board of Trustees and its Committees. The Director shall be the official medium of communication between the Board, or its Committees, and the scientific staff and maintenance force.

SAC. 2. There shall be four scientific departments of the Museum—Anthropology, Botany, Geology, and Zoology, each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SAC. 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month.

At the Annual Meeting the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

ARTICLE VI.

AUDITOR.

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial conditions and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board. He shall certify to the correctness of all vouchers for the expenditure of the money of the corporation.

ARTICLE VII.

COMMITTEES.

SECTION 1. There shall be five Committees as follows: Finance, Building, Auditing, Administration and Executive.

SEC. 2. The Finance, Building and Auditing Committees shall each consist of three members, and the Administration Committee shall consist of five members. All members of these four Committees shall be elected by ballot by the Board at the Annual Meeting, and shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees the Board shall designate the Chairman and Vice-Chairman by the order in which the members are named in the respective Committee; the first member named shall be Chairman, the second named the Vice-Chairman, and the third named Second Vice-Chairman, succession to the Chairmanship being in this order in the event of the absence or disability of the Chairman.

SEC. 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Administration Committee, the Chairman of the Auditing Committee, and such other members of the Board to be elected by ballot at the Annual Meeting.

SEC. 4. Four members shall constitute a quorum of the Executive Committee; three members shall constitute a quorum of the Administration Committee, and in all other standing Committees two members shall constitute a quorum. In the event that, owing to the absence or inability of members a quorum of the regularly elected members cannot be present at any meeting of any Committee, then the Chairman thereof, or his successor, as herein provided, may summon any member of the Board of Trustees to act in place of the absentee.

SEC. 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest, funds, subject to the approval of the Board.

SEC. 6. The Building Committee shall have supervision of the construction, reconstruction, and extension of any and all buildings used for Museum purposes.

SEC. 7. The Executive Committee shall be called together from time to time as the Chairman may consider necessary, or as he may be requested to do



Gorilla. (*Gorilla gorilla* Savage & Wyman.)

by three members of the Committee, to act upon such matters affecting the administration of the Museum as cannot await consideration at the Regular Monthly Meetings of the Board of Trustees. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommendations as to the expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the respective Committees shall be considered ■ authorized to make the expenditures detailed therein. No increase in the expenditures under any items of the Budget shall be made, except by authority of the Board of Trustees, but the Executive Committee shall have authority, in cases of emergency, to expend a further total sum not exceeding two thousand dollars in any one month.

SEC. 8. The Administration Committee shall have general supervision of the affairs of the Museum. The Committee shall hold one meeting each month with the Director at the Museum within a week preceding each Monthly Meeting of the Board of Trustees.

SEC. 9. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, ■ oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SEC. 10. The Chairman of each Committee shall report the ■ and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 11. The President shall ■ ex-officio a member of all Committees and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

ARTICLE VIII.

NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board each year a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, the Administration Committee, and the Auditing Committee, and for two members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting and voted upon at the following Annual Meeting in January.

ARTICLE IX.

SECTION 1. Whenever the word "Museum" is employed in the By-Laws of the Corporation, it shall be taken to ■ the building in which the Museum as ■ Institution is located and operated, the material exhibited, the material in study collections, or in storage, furniture, fixtures, cases, tools, records, books, and all appurtenances of the Institution, and the workings, researches, installations, expenditures, field work, laboratories, library, publications, lecture courses, and all scientific and maintenance activities.

SEC. 2. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.

HONORARY MEMBERS.

EDWARD E. AYER
HARLOW N. HIGINBOTHAM
CHARLES B. CORY

STANLEY McCORMICK
ROBERT F. CUMMINGS
MRS. TIMOTHY B. BLACKSTONE

DECEASED.

GEORGE M. PULLMAN
MARY D. STURGES.

PATRONS.

ALLISON V. ARMOUR
DANIEL H. BURNHAM
ERNEST R. GRAHAM
VERNON SHAW KENNEDY
GEORGE MANIERRE

JOHN S. MILLER
JOHN BARTON PAYNE
FREDERICK W. PUTNAM
FREDERICK J. V. SKIFF
WILLARD A. SMITH

EDWIN WALKER

DECEASED.

WILLIAM I. BUCHANAN

CORPORATE MEMBERS.

ADAMS, GEORGE E.
ALDIS, OWEN F.
ARMOUR, ALLISON V.
AYER, EDWARD E.

BARTLETT, A. C.
BLACK, JOHN C.
BLAIR, WATSON F.
BLATCHFORD, ELIPHALET W.
BUCKINGHAM, EBENEZER
BURNHAM, DANIEL H.
BUTLER, EDWARD B.

CHALMERS, W. J.
CHATFIELD-TAYLOR, H. C.
CLARK, JOHN M.
CRANE, RICHARD T., JR.
CURTIS, WILLIAM E.

EASTMAN, SIDNEY C.
ELLSWORTH, JAMES W.

FIELD, STANLEY

GAGE, LYMAN J.
GETTY, HENRY H.
GRAHAM, ERNEST R.
GUNSAULUS, FRANK W.
GUNTHER, C. F.

HEAD, FRANKLIN H.
HIGINBOTHAM, H. N.

HUTCHINSON, CHARLES L.

JONES, ARTHUR B.

KENNEDY, VERNON SHAW
KOHLSAAT, HERMAN H.

LATHROP, BRYAN

MCCORMICK, CYRUS H.
MANIERRE, GEORGE
MILLER, JOHN S.
MITCHELL, JOHN J.

PATTERSON, ROBERT W.
PAYNE, JOHN BARTON
PECK, FERD. W.
PORTER, GEORGE F.
PUTNAM, FREDERICK W.

REAM, NORMAN B.
RYERSON, MARTIN A.

SKIFF, FREDERICK J. V.
SMITH, BYRON L.
SMITH, WILLARD A.
SPRAGUE, A. A.
STONE, MELVILLE E.

WALKER, EDWIN
WALSH, JOHN R.

DECEASED.

ARMOUR, PHILIP D.
BAKER, WILLIAM T.
BISSSEL, GEORGE F.
BUCHANAN, W. I.
CRAWFORD, ANDREW
DAVIS, GEORGE R.
FITZSIMONS, CHARLES
HALE, WILLIAM E.
HARPER, WILLIAM R.
HATCH, AZEL F.
JACKSON, HUNTINGTON W.
LEITER, L. Z.

MCCAGG, E. B.
MCCLURG, A. C.
MCNALLY, ANDREW
PEARCE, J. IRVING
PETERSON, ANDREW
PULLMAN, GEORGE M.
SCHNEIDER, GEORGE
SCOTT, JAMES W.
STOCKTON, JOSEPH
WALLER, R. A.
WILLIAMS, NORMAN

LIFE MEMBERS.

ADAMS, GEORGE E.
ALDIS, OWEN F.

BARRETT, MRS. A. D.
BARRETT, ROBERT L.
BARRETT, S. E.
BARTLETT, A. C.
BLACKSTONE, MRS. TIMOTHY B.
BLAIR, CHAUNCEY J.
BLAIR, WATSON F.
BOOTH, W. VERNON
BURNHAM, D. H.
BUTLER, EDWARD B.

CARTER, JAMES S.
CARTON, L. A.
CHALMERS, WILLIAM J.
CRANE, R. T.

DEERING, CHARLES
DRAKE, TRACY C.

FARWELL, WALTER
PAY, C. N.
FIELD, STANLEY
FULLER, WILLIAM A.

GARTZ, A. F.
GRISCOM, CLEMENT A.
GROMMES, JOHN B.

HAMILL, EARNEST A.
HILL, LOUIS W.
HUGHITT, MARVIN
HUTCHINSON, C. L.

INGALLS, M. E.
ISHAM, MRS. KATHERINE
PORTER.

JOHNSON, FRANK S.
JOHNSON, MRS. ELIZABETH
AYER
JONES, ARTHUR B.

KING, FRANCIS
KING, JAMES C.
KIRK, WALTER RADCLIFFE

LAWSON, VICTOR F.

McCORMICK, ■■■■■
McCORMICK, CYRUS H.
McCORMICK, HAROLD ■
MacVEAGH, FRANKLIN
MITCHELL, J. J.

NEWELL, A. B.

ORR, ROBERT M.

PEARSONS, D. K.
PIKE, EUGENE S.
PORTER, GEORGE F.
PORTER, H. H.
PORTER, H. H., Jr.

REAM, MRS. CAROLINE P.
REAM, NORMAN B.
REVELL, ALEX. H.
RUSSELL, EDMUND A.
RYERSON, MRS. CARRIE H.
RYERSON, MARTIN A.

SCHLESINGER, LEOPOLD
SINGER, C. G.
SMITH, BYRON L.
SMITH, ORSON
SPRAGUE, A. A.
STURGES, GEORGE

THORNE, GEORGE R.
TREE, LAMBERT

WELLS, M. D.
WILLARD, ALONZO J.
WOLFF, LUDWIG

ANNUAL MEMBERS.

ADAMS, CYRUS H.
ADAMS, MILWARD
ALLERTON, ROBERT H.
AMBERG, WILLIAM A.
ARMOUR, GEORGE A.

BAILEY, EDWARD P.
BANGA, DR. HENRY
BARNES, CHARLES J.
BARRELL, JAMES
BECKER, A. G.
BILLINGS, C. K. G.
BILLINGS, DR. FRANK
BIRKHOFF, GEORGE, JR.
BLAINE, MRS. EMMONS
BLAIR, HENRY A.
BOAL, CHARLES T.
BOUTON, C. B.
BREMNER, DAVID P.
BROWN, WILLIAM L.
BURLEY, CLARENCE A.

CARPENTER, A. A.
COMSTOCK, WILLIAM C.
CONOVER, CHARLES H.
COONLEY-WARD, MRS. L. A.
CORWITH, CHARLES R.
COWAN, W. P.
CRANE, CHARLES R.
CUDAHY, JOHN
CUMMINGS, E. A.
CURTIS, D. H.

DAY, A. M.
DAY, CHAPIN A.
DEERING, JAMES
DEERING, WILLIAM
DILLMAN, L. M.

EISENDRATH, W. N.
EMMERICH, EDWARD ■

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FORSYTH, ROBERT
FRANK, HENRY L.
FRASHER, JOHN E. L.
FULLER, O. P.
FÜRST, CONRAD

GAYLORD, FREDERIC
GLESSNER, J. J.
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GORDON, EDWARD K.
GRAHAM, E. R.
GREEN, ■ H. R.
GREY, CHARLES F.
GREY, WILLIAM L.
GURLEY, W. W.

HARDING, AMOS J.
HARRIS, GEORGE B.
HARRIS, JOHN F.
HARRIS, N. W.
HASKELL, FREDERICK T.
HERTLE, LOUIS
HITCHCOCK, R. M.
HOLDOM, JESSE
HOLT, GEORGE H.
HOPKINS, JOHN P.
HORNER, ISAAC
HOSKINS, WILLIAM
HOUGHTLING, JAMES L.

INSULL, SAMUEL

JEFFERY, THOMAS B.
JENKINS, GEORGE H.
JONES, J. S.

KEEFER, LOUIS
KEITH, W. SCOTT
KELLEY, WILLIAM E.
KIMBALL, EUGENE S.
KIMBALL, MRS. MARK.

LAMB, FRANK H.
LAWSON, VICTOR P.
LAY, A. TRACY
LEFENS, THIES J.
LEIGH, EDWARD B.
LINCOLN, ROBERT T.
LINN, W. R.
LOGAN, F. G.
LORD, J. B.
LOWDEN, FRANK O.
LYTTON, HENRY C.

MCCREA, W. S.
MCGUIRE, REV. H.
MCWILLIAMS, LAFAYETTE
MAGEE, HENRY W.
MANSON, WILLIAM
MANSURE, E. L.
MAY, FRANK E.
MAYER, LEVY
MERRYWEATHER, GEORGE
MEYER, MRS. M. A.
MILLER, CHARLES P.
MILLER, JOHN S.
MOORE, L. T.
MOORE, N. G.
MORRIS, EDWARD
MULLIKEN, A. H.
MULLIKEN, CHARLES H.

NATHAN, ADOLPH
NOLAN, JOHN H.
NORTON, O. W.
NOYES, LA VERNE W.

OSBNE, THEODORE
ORB, JOHN A.
OSBORN, HENRY A.

PALMER, PERCIVAL B.
PARKER, FRANCIS W.
PEARSON, EUGENE H.
PETERS, HOMER H.

PINKERTON, W. A.
PORTER, WASHINGTON

RIPLEY, E. P.
ROSENBAUM, JOSEPH
ROSENFELD, MAURICE
RUMSEY, GEORGE D.
RUNNELLS, J. S.

SCHMIDT, DR. O. L.
SCHMITT, ANTHONY
SCHWARTZ, G. A.
SEARS, JOSEPH
SEIPP, MRS. C.
SEIPP, W. C.
SELZ, MORRIS
SHEDD, JOHN G.
SKINNER, THE MISSES
SMITH, F. B.
SNOW, MISS HELEN E.
SOPER, JAMES P.
SOUTHWELL, H. E.
SPENCE, MRS. ELIZABETH E.
SPOOR, J. A.
STOCKTON, JOHN T.
STUART, ROBERT

TEMPLETON, THOMAS
TOBEY, FRANK B.

UIHLEIN, EDWARD G.

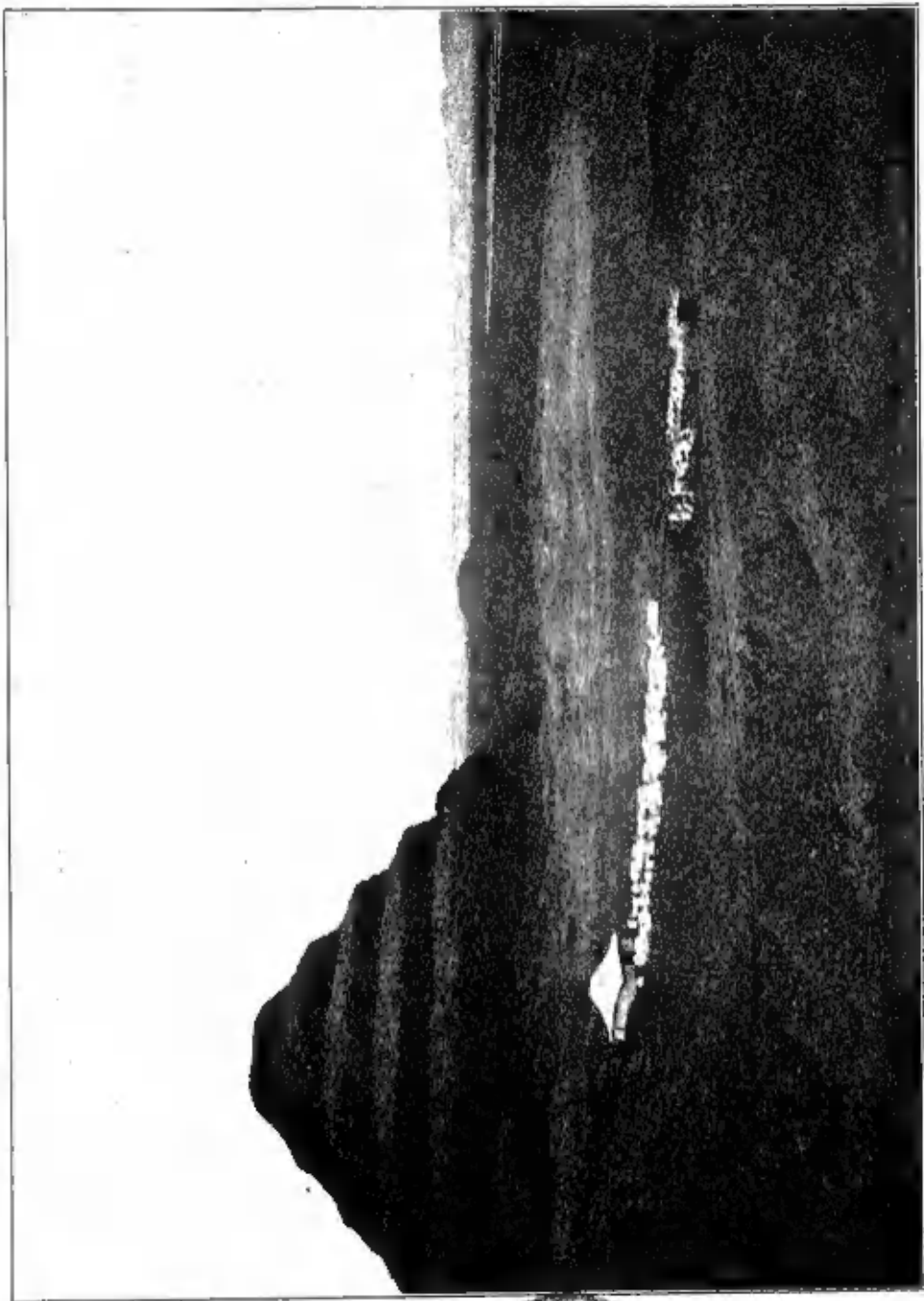
WACKER, CHARLES H.
WALKER, JAMES R.
WALKER, WILLIAM B.
WALLER, EDWARD C.
WARNER, EZRA J.
WEBSTER, GEORGE H.
WHITE, A. STAMFORD
WHITEHEAD, W. M.
WILSON, MRS. E. C.
WILSON, M. H.
WOODCOCK, LINDSAY T.

DECEASED.

BROWN, GEORGE P.
CABLE, R. R.
COX, ALFRED J.

MORRIS, MRS. NELSON
RANDALL, THOMAS D.
STEELE, HENRY B.





Scene of Excavation of Mastaba Tomb. (Stones Boxed and Ready for Shipment.)



Mc 2

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